Grade 4 Math Answer Key

Grade 4 Standards

Operations and Algebraic Thinking
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4.OA.A.02
4.OA.A.03
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Number and Operations in Base Ten
4.NBT.A.01
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Measurement and Data
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Geometry
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Operations and Algebraic Thinking
4.OA.A.01
Items 1 – 6

ITEM 1

Which statement is a correct interpretation of the equation?

$$14 \times 3 = 42$$

A. 14 is 3 more than 42.

B. 42 is 14 more than 3.

C. 14 is 3 times as many as 42.

D. 42 is 3 times as many as 14.

ITEM 2

Which statement best describes the equation?

$$120 = 6 \times 20$$

A. 120 is 6 more than 20.

B. 20 is 6 less than 120.

C. 20 is 6 times as many as 120.

D. 120 is 6 times as many as 20.

ITEM 3

Which statement represents the equation?

$$30 = 3 \times 10$$

A. 30 is 3 times as many as 10.

B. 3 is 10 times as many as 30.

C. 30 is 3 more than 10.

D. 3 is 10 less than 30.

ITEM 4

Choose the comparison statement that best describes the number sentence.
3 x 9 = 27

A. 3 is 9 times as many as 27.

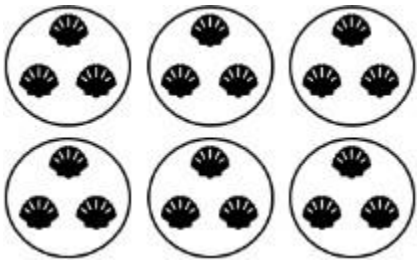
B. 9 is 3 times as many as 27.

C. 3 is 27 times as many as 9.

D. 27 is 9 times as many as 3.

ITEM 5

Gwen collected shells while on a beach vacation. She decided to sort the shells into 6 equal groups shown.



Which statement describes the grouping of Gwen's shells?

A. 18 is 6 more than 3.

B. 18 is 6 times as many as 3.

C. 18 is 3 more than 6.

D. 6 is 3 times as many as 18.

ITEM 6

Matthew and Kate sold chocolate bars to raise money for their school.

- Matthew sold 7 times as many chocolate bars as Kate.
- Matthew sold 28 chocolate bars.

Which equation could be used to find how many chocolate bars, *b*, Kate sold?

A. $7 \times 28 = b$
B. $28 - 7 = b$
C. $7 + 28 = b$
D. $28 \div 7 = b$

Operations and Algebraic Thinking
4.OA.A.02
Items 7 – 19

ITEM 7

Aidan has 36 blocks. He has 4 times the number of blocks that Betty has. Which number sentence can Aidan use to find the number of blocks Betty has?

A. 36 + 4 = _____

B. 36 – 4 = _____

C. 36 × 4 = _____

D. 36 ÷ 4 = _____

ITEM 8

A zoo has 5 times as many zebras as lions. There are 25 zebras. Which number sentence can be used to find the number of lions?

A. 25 + 5 = _____

B. 25 – 5 = _____

C. 25 × 5 = _____

D. 25 ÷ 5 = _____

ITEM 9

Gary has 72 cows on his farm. He has 6 times as many cows as he has horses. How many horses does Gary have?

A. 12 horses

B. 66 horses

C. 78 horses

D. 432 horses

ITEM 10

David's dad is 30 years old. His dad is five times David's age. How many years old is David?

A. 5

B. 6

C. 10

D. 15

ITEM 11

It takes Megan 6 minutes to get to school. It takes Joey four times as long to get to school. How many minutes does it take Joey to get to school?

A. 4

B. 6

C. 12

D. 24

ITEM 12

Macie has 15 nickels in her purse. She has two times as many dimes as nickels. How many dimes does she have?

A. 2

B. 15

C. 30

D. 96

ITEM 13

A football player runs 1,008 yards in the whole football season. This amount is 8 times the number of yards he ran in the third game of the season. How many yards did the football player run in the third game of the season?

A. 112

B. 126

C. 131

D. 143

ITEM 14

A small tank at the aquarium hold 15 liters of water. A large tank at the aquarium holds 12 times as much water as the small tank holds. How many liters of water does the large tank hold?

A. 3 liters

B. 27 liters

C. 150 liters

D. 180 liters

ITEM 15

There are 1,392 people at the market. There are 4 times as many people in a mall. How many people are in the mall?

Enter the correct number into the blank.

5568

ITEM 16

Megan is 8 years old. Her mother is 4 times as old as Megan. How old is Megan's mother?

A. 12

B. 20

C. 24

D. 32

ITEM 17

Gregory has 4 times as many pencils as Joanna in his art bag. Joanna has 24 pencils. Which equation shows how to find how many pencils Gregory has in his art bag?

A. _____ – 24 = 4

B. 24 + 4 = _____

C. 24 ÷ 4 = _____

D. 24 × 4 = _____

ITEM 18

Grace is saving money to buy her grandmother a birthday gift. This month she saved three times as much money as last month. Last month, Grace saved $12. Which equation can be used to find *g*, the amount of money Grace saved this month?

A. $3 + g = 12$

B. $12 + 3 = g$

C. $12 \div g = 4$

D. $3 \times 12 = g$

ITEM 19

At a baseball stadium a sandwich box costs $4. A chicken tender box costs 3 times as much as the sandwich box. If the symbol △ stands for the cost of a chicken tender box, which equation can be used to find the cost of a chicken tender box?

A. 4 + 3 = △

B. 4 – 3 = △

C. 4 ÷ 3 = △

D. 4 x 3 = △

Operations and Algebraic Thinking
4.OA.A.03
Items 20 – 35

ITEM 20

The Kennedy High School basketball team earns $8 for each admission ticket sold at a game. There are 11 rows of seats of seats in the arena, and each row has 58 seats. During one game, every seat is full. Which is the best estimate for the total amount the basketball team will earn from this game?

A. $600

B. $1,200

C. $5,000

D. $12,000

ITEM 21

An airline owns 5 planes. Each plane holds 30 passengers. A total of 122 passengers have seats. How many seats are empty?

A. 18

B. 20

C. 24

D. 28

ITEM 22

A national park plans to purchase a t-shirt for each of its 783 park employees and 3,194 concession stand employees. The cost per shirt is $5.

Janet says that it would cost $18,855 to purchase the shirts.

Which expression can best be used to decide whether Janet's answer is reasonable?

A. $(700 + 3{,}000) \times 5$

B. $(800 + 3{,}200) \times 5$

C. $(780 + 3{,}190) \times 10$

D. $(800 + 3{,}200) \times 10$

ITEM 23

A truck delivers 35 cases of books to the library. Each case holds 12 books. The librarian plans to place 8 books on each shelf. What is the fewest number of shelves the librarian will need to hold all of the books delivered by the truck?

A. 5

B. 6

C. 52

D. 53

ITEM 24

A stamp collector has 348 United States stamps and 536 stamps from other countries. He wants to put all of the stamps in an album. Each page of the album holds 8 stamps. What is the fewest number of pages he could use in the album?

A. 44

B. 67

C. 110

D. 111

ITEM 25

The number of tickets sold at a movie theater over a 3-day period is represented in the table.

Ticket Sales

Day	Tickets
1	1,572
2	1,753
3	?

On the third day, the theater sold 152 tickets fewer than the number sold on the second day. How many tickets did they sell in all for the three days?

A. 4,926

B. 3,477

C. 3,826

D. 1,642

ITEM 26

A baker sold cookies, donuts, and cupcakes. The baker made $1,396 from selling cookies, $3,738 from selling donuts, and $4,932 from selling cupcakes. What is the total amount of money the baker made from selling all three items?

A. $9,066

B. $10,066

C. $10,032

D. $10,166

ITEM 27

The table shows the number of tickets the Houston Museum of Science sold on Friday and Saturday.

Day	Number of Tickets Sold
Friday	258
Saturday	424
Sunday	

The museum sold 176 more tickets on Sunday than on Friday. How many total tickets were sold over the 3-day period?

A. 1,116

B. 858

C. 600

D. 434

ITEM 28

Jacob has 391 marbles. He buys 43 more marbles. He sells 146 marbles in small bags at a fair. Jacob wants to sell big bags of marbles at the next fair. A big bag holds 14 marbles.

What is the **greatest** number of big bags of marbles that Jacob can sell at the fair?

Enter the correct number into the blank.

20

ITEM 29

Jill purchases 16 boxes of books for her school's library. There are 6 books in each box. What is the total number of books Jill bought?

Enter the correct number in the blank.

96

ITEM 30

There are 638 students on a canoeing trip. All of the students will take a trip down the river in canoes. Each canoe can hold 6 students. What is the fewest number of canoes that can be used so that all students are able to take the trip?

A. 16

B. 17

C. 106

D. 107

ITEM 31

The fourth grade students at Clear Creek Elementary are taking a field trip to the zoo. There are 189 fourth grade students going on the field trip, and all students will travel to the zoo in vans. If each van holds 6 students, what is the least number of vans will be needed for the field trip?

A. 30

B. 31

C. 32

D. 34

ITEM 32

There were 4,570 people at a State Fair. Each person bought 5 tickets. How many tickets were bought at the State Fair?

A. 914

B. 9,014

C. 22,535

D. 22,850

ITEM 33

Coach Bradford bought dinner for his entire football team after the team won the championship. There were 25 players on the team and each dinner cost $12. What was the total amount Coach Bradford paid for dinner?

A. $120

B. $265

C. $297

D. $300

ITEM 34

Jer'shaun and his family are traveling to see his grandparents.

- On Friday, they travel 263 miles.
- On Saturday, they travel 2 times the number of miles they traveled on Friday.
- On Sunday, they travel 139 fewer miles than they did on Saturday.

Part A

Calculate the total number of miles Jer'shaun and his family traveled on Friday, Saturday, and Sunday altogether. Show all your work.

Jer'shaun and his family traveled a total of 1176 miles on Friday, Saturday, and Sunday.
On Friday they traveled 263 miles. On Saturday then traveled twice as far as Friday, or 263 x 2 = 526 miles. On Sunday they traveled 526 – 139 = 387 miles.
263 miles + 526 miles + 387 miles = 1176 miles

Part B

A week later Jer'shaun and his family will return home by the same route. They decide that they want to travel the same number of miles on Friday, Saturday, and Sunday. Explain how to find the number of miles the family would need to travel each day.

Jer'shaun and his family will have to drive a total of 392 miles each day on Friday, Saturday, and Sunday.
If the entire trip takes 1176 miles, then 1176 miles ÷ 3 days = 392 miles / day.

ITEM 35

Four 4th grade classes are going on a field trip to the aquarium.

- Three of the classes have 18 students.
- One class has 10 students.
- Parents will be driving to students in their own vehicles.
- Each vehicle can hold 5 students.

Write an equation or equations to find the least number of vehicles needed so all the students can attend the field trip. Show your work or describe the process you used to determine how many vehicles are needed to transport the three classes to the aquarium.

$(3 \times 18 + 10) \div 5 = v$ where v stands for the number of vehicles needed.
13 parent vehicles are needed to take all 64 students on the field trip.

I would divide because I'm trying to answer the question, how many groups of 5 students can be made from 64 students?
$64 \div 5 = 12$ R4
There are 12 groups of 5 in 64 with a remainder of 4. Saying that 12 R4 vehicles is needed doesn't make sense because a fraction of a vehicle cannot be used. If I round this number down to 12, then 4 kids won't have transportation. So the number of vehicles needs to be rounded up to 13.

Operations and Algebraic Thinking
4.OA.B.04a
Items 36 – 39

ITEM 36

Which number is a factor of 20?

A. 10

B. 15

C. 25

D. 40

ITEM 37

Which list shows all the factors of 45?

A. 1, 5, 9, 45

B. 0, 1, 3, 5, 9, 15, 45

C. 3, 5, 9, 15

D. 1, 3, 5, 9, 15, 45

ITEM 38

Which pair of numbers both have 3 and 5 as factors?

A. 25 and 30

B. 30 and 48

C. 35 and 60

D. 45 and 60

ITEM 39

The factors of a number include 2, 3, and 4. Which of the following could be the number?

A. 14

B. 28

C. 36

D. 45

Operations and Algebraic Thinking
4.OA.B.04b
Items 40 – 41

ITEM 40

12 numbers are shown in the box.

1	4	8	12	16
20	24	28	32	36

Which list includes all the multiples of 12 that are shown in the box?

A. 12, 24, 36

B. 1, 4, 8, 12

C. 12, 16, 20, 24, 28, 32, 36

D. 1, 4, 8, 16, 20, 28, 32

ITEM 41

45 is a multiple of which **two** numbers?

A. 4

B. 5

C. 6

D. 7

E. 9

Operations and Algebraic Thinking
4.OA.B.04c
Items 42 – 44

ITEM 42

Which list shows four numbers that are multiples of 8?

A. 8, 16, 28, 32

B. 8, 24, 58, 80

C. 24, 32, 48, 88

D. 16, 24, 36, 68

ITEM 43

28 is a multiple of which numbers? Choose the **three** correct answers.

A. 4

B. 6

C. 7

D. 8

E. 12

F. 14

ITEM 44

Which number is a multiple of 6?

A. 65

B. 76

C. 80

D. 96

Operations and Algebraic Thinking
4.OA.C.05
Items 45 – 47

ITEM 45

Olivia used the rule "Add 11" to create the number pattern shown below.

10, 21, 32, 43, 54

Which statement about the number pattern is true?

A. The 10th number in the pattern will be an even number.

B. The number pattern will never have two even numbers next to each other.

C. The next two numbers in the pattern will be an even number then an odd number.

D. If the number pattern started with an odd number then the pattern would have only odd numbers in it.

ITEM 46

Andrea described a pattern this way:

The pattern started with 5. Then I multiplied by 2 to get each new term.

Which pattern did Andrea describe?

A. 5, 10, 15, 20, 25, . . .

B. 5, 10, 20, 40, 80, . . .

C. 5, 25, 50, 100, 200, . . .

D. 5, 25, 125, 625, 3,125, . . .

ITEM 47

The first number in a pattern is 7. The pattern rule is to add 2. What is the fifth number in the pattern?

7, _____ , _____, _____, 15

Enter the correct number in the blank.

Number and Operations in Base Ten
4.NBT.A.01
Items 48 – 54

ITEM 48

Which of the following choices has a 7 that is 10 times as much as the value of 7 in 43,721?

A. 12,347

B. 34,271

C. 47,321

D. 73,142

ITEM 49

How many times greater is the value of the digit 5 in 583,607 than the value of the digit 5 in 362,501?

A. 10

B. 10×10

C. $10 \times 10 \times 10$

D. $10 \times 10 \times 10 \times 10$

ITEM 50

The value of the digit 6 in the number 760,715 is 10 times the value of the digit 6 in which number?

A. 64

B. 653

C. 6,930

D. 60,834

ITEM 51

Which number has a 7 that is ten times the value of the 7 in the number 27,543?

A. 27,546

B. 35,734

C. 52,873

D. 73,452

ITEM 52

Which number correctly completes the equation, 6,000 ÷ 600 =_____?

A. 10

B. 100

C. 1,000

D. 10,000

ITEM 53

Which number has a 9 that is ten times the value of the 9 in the number 28,943?

A. 24,946

B. 35,794

C. 92,873

D. 79,452

ITEM 54

Which number has a 7 that is ten times the value of the 7 in the number 58,743?

A. 54,746

B. 35,874

C. 72,873

D. 97,452

Number and Operations in Base Ten
4.NBT.A.02
Items 55 – 71

ITEM 55

Fill in the blank with the number that makes the equation true.

4 ten thousands = _____ thousands

A. 4

B. 40

C. 400

D. 4000

ITEM 56

What is 2,091 written in expanded form?

A. 20 + 9 + 1

B. 2 + 0 + 9 + 1

C. 2,000 + 90 + 1

D. 2,000 + 900 + 1

ITEM 57

What is another way of writing three thousand four hundred eight?

A. 3,408

B. 3,480

C. 30,408

D. 34,008

ITEM 58

What is another way of writing 8,304?

A. eight hundred thirty-four

B. eight thousand thirty-four

C. eight thousand three hundred four

D. eight thousand three hundred forty

ITEM 59

Students were asked to write the number 23,407 in a different form. Their answers are in the table below.

Student	Student Responses
Lori	20,000 + 3,000 + 400 + 7
Connie	20,000 + 3,000 + 40 + 7
Jennifer	(2 × 10,000) + (3 × 1,000) + (4 × 10) + (7 × 1)
Eamon	(2 × 10,000) + (3 × 1,000) + (4 × 100) + (7 × 1)
Kaleb	twenty-three thousand, forty-seven
Declan	twenty-three thousand, four hundred seven

Which students correctly expressed the number 23,407?

A. Connie, Jennifer, and Kaleb

B. Lori, Kaleb, and Eamon

C. Lori, Eamon, and Declan

D. Connie, Eamon, and Kaleb

ITEM 60

Which of the following choices is equivalent to 23,478?

A. Twenty-three, four hundred seventy-eight

B. 20,000 + 30,000 + 400 + 70 + 8

C. Twenty-three thousand, four seventy-eight

D. 20,000 + 3,000 + 400 + 70 + 8

ITEM 61

What is 4,163 written in expanded form?

A. 41 + 60 + 3

B. 400 + 10 + 63

C. 4,000 + 16 + 3

D. 4,000 + 100 + 60 + 3

ITEM 62

What is 19,924 written in words?

A. nineteen thousand, nine hundred twenty-four

B. nineteen thousand, nine hundred forty-two

C. ninety thousand, nine hundred twenty-four

D. ninety thousand, nine hundred forty-two

ITEM 63

What number has an expanded form of 50,000 + 1,000 + 80?

A. 510,800

B. 51,080

C. 5,108

D. 518

ITEM 64

What is another way to represent 980,197?

A. 9 millions, 8 hundred thousands, 1 hundred, 9 tens, 7 ones

B. 9 millions, 8 ten thousands, 1 hundred, 9 tens, 7 ones

C. 9 hundred thousands, 8 ten thousands, 1 hundred, 9 tens, 7 ones

D. 9 hundred thousands, 8 thousands, 1 hundred, 9 tens, 7 ones

ITEM 65

Order the following numbers from least to greatest.

734, 921

95, 303

70,956

739,103

405,227

A. 739,103 734,921 405,227 95,303 70,956

B. 405,227 70,956 734,921 739,103 95,303

C. 70,956 95,303 405,227 739,103 734,921

D. 70,956 95,303 405,227 734,921 739,103

ITEM 66

Which of the following is 750,700 in word form?

A. seventy-five thousand, seven hundred

B. seven hundred fifty-seven thousand

C. seven hundred five thousand, seven hundred

D. seven hundred fifty thousand, seven hundred

ITEM 67

Which number sentence is correct?

A. 5,978 < 4,244

B. 5,978 < 8,132

C. 8,132 < 4,244

D. 8,132 < 5,978

ITEM 68

Which number makes this number sentence **true**?

4,826 < _____

A. 4,862

B. 4,819

C. 4,698

D. 4,289

ITEM 69

Which number correctly completes this number sentence? 432,854 < _____

A. 432,012

B. 432,698

C. 432,850

D. 432,864

ITEM 70

Which has the same value as 856,044?

A. 850,000 + 6,000 + 400 + 40

B. 800,000 + 50,000 + 6,000 + 40 + 4

C. 80,000 +5,000 + 600 + 40 + 4

D. 800,000 + 50,000 +6,000 + 400 + 40

ITEM 71

Select **two** ways to show 2,754.

A. 2 thousands + 7 hundreds + 54 tens

B. 2 thousands + 7 hundreds + 5 tens + 4 ones

C. 2 thousands + 75 hundreds + 4 ones

D. 2 thousands + 7 hundreds + 54 ones

E. 27 thousands + 5 tens + 4 ones

Number and Operations in Base Ten
4.NBT.A.03
Items 72 – 82

ITEM 72

What is 8,874 rounded to the nearest thousand?

A. 8,000

B. 8,900

C. 9,000

D. 10.000

ITEM 73

When rounded to the nearest thousand, which of the following numbers would round to 17,000?

A. 16,479

B. 17,089

C. 17,532

D. 18,777

ITEM 74

Last year 216,439 fans attended the parish fair. Jaycee is writing an article about the event for her school's website. She wants to use an estimate of the attendance rounded to the nearest thousand. Which one of the following values represents Jaycee's estimate?

A. 210,000

B. 217,000

C. 220,000

D. 300,000

ITEM 75

Select the **three** values that show correct rounding of the number 3,496,291.

A. 4,000,000

B. 3,497,000

C. 3,496,300

D. 3,496,290

E. 3,496,000

F. 3,400,000

ITEM 76

Last year's concert attendance was 18,594. Tyler is printing tickets for this year's concert and needs a good estimate. What is last year's attendance rounded to the nearest thousand?

Enter the correct number in the blank.

19,000

ITEM 77

Last year, there were 395,627 visitors to the state capitol. To plan for the next year, what would be a good estimate the office of tourism could use?

A. 400,000

B. 395,000

C. 390,000

D. 300,000

ITEM 78

Dinel rounded the total number of students who go to school in her parish. She says the total number is 14,000. Which of the following numbers can be correctly rounded to 14,000?

A. 14,493

B. 14,593

C. 14,963

D. 15,135

ITEM 79

Which one of the following choices is the correct way to round the number 984,711 to the nearest 1,000?

A. 984,000

B. 984,700

C. 985,000

D. 985,700

ITEM 80

Round the number 636,157 to the nearest 10,000.

Enter the correct number into the blank.

_640,000__

ITEM 81

Select **three** correct ways to round the given number.

914,028

A. rounding to the nearest 10 is 914,010

B. rounding to the nearest 100 is 914,000

C. rounding to the nearest 1,000 is 914,000

D. rounding to the nearest 10,000 is 910,000

E. rounding to the nearest 100,000 is 1,000,000

ITEM 82

Select **three** correct ways to round the given number.

709,942

A. rounding to the nearest 10 is 709,950

B. rounding to the nearest 100 is 709,900

C. rounding to the nearest 1,000 is 709,000

D. rounding to the nearest 10,000 is 710,000

E. rounding to the nearest 100,000 is 700,000

Number and Operations in Base Ten
4.NBT.B.04
Items 83 – 95

ITEM 83

8,934 + 602 = 9536

Enter the correct number in the blank.

ITEM 84

Find the number that makes the equation true. Enter the correct number in the blank.

16,739 - 12,409 = 4330_

ITEM 85

What is the value of the expression shown? Enter the correct number in the blank.

3,924 - 1,895 = _2029_

ITEM 86

Find the value of the expression.

34,597 + 26,231

A. 50,728

B. 50,828

C. 60,728

D. 60,828

ITEM 87

Find the value of the expression.

65,071 – 24,528

A. 30,543

B. 40,542

C. 40,543

D. 41,553

ITEM 88

Find the value of the expression. Enter your answer in the blank.

52,341 – 13,562 = _38,779_

ITEM 89

Find the value of the expression. Enter your answer in the blank.

96,387 + 85,134 = 181,521

ITEM 90

Find the value of the expression.

100,287 – 26,314 = _____

A. 184,173

B. 173,973

C. 83,973

D. 73,973

ITEM 91

What is 436,921 + 315,843?

A. 741,764

B. 742,764

C. 752,764

D. 752,864

ITEM 92

Find the value of the expression. Enter the correct number in the blank.

63,185 – 14,290 = 48,895

ITEM 93

Find the value of the expression. Enter the correct number in the blank.

76,584 + 13,909 = 90,493

ITEM 94

What is the value of the expression?

28,014 – 2,765

A. 25,249

B. 25,339

C. 25,349

D. 26,751

ITEM 95

What is the value of the expression?

5,612 + 9,749

A. 14,351

B. 15,361

C. 16,341

D. 16,351

Number and Operations in Base Ten
4.NBT.B.05
Items 96 – 101

ITEM 96

Find the number that makes the equation **true**. Enter the correct number in the blank.

5,934 × 7 = 41,538

ITEM 97

Multiply. $90 \times 36 = ?$

A. 288

B. 324

C. 3,195

D. 3,240

ITEM 98

Multiply. $28 \times 34 = ?$

A. 408

B. 412

C. 852

D. 952

ITEM 99

Multiply. $22 \times 16 = ?$

A. 38
B. 132
C. 352
D. 2,012

ITEM 100

Multiply. 42 x 36 = ?

A. 192

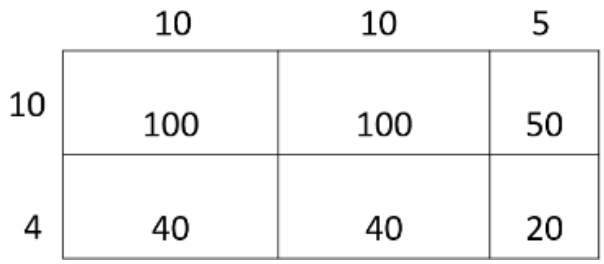
B. 252

C. 1,212

D. 1,512

ITEM 101

What multiplication expression does this area model show?



	10	10	5
10	100	100	50
4	40	40	20

A. 250 x 100

B. 105 x 40

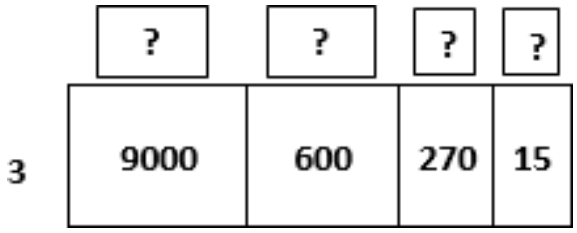
C. 40 x 25

D. 14 x 25

Number and Operations in Base Ten
4.NBT.B.06
Items 102 – 103

ITEM 102

Use the area model to respond to Parts A, B, and C.



Part A
Find the quotient for 9,885 ÷ 3. Include an explanation of how you used the model to find your answer.

The quotient for 9,885 ÷ 3 is 3295.

9000 + 600 + 270 + 15 = 9885

9000 ÷ 3 = 3000
600 ÷ 3 = 200
270 ÷ 3 = 90
15 ÷ 3 = 5

3000 + 200 + 90 + 5 = 3295

Part B
Explain how multiplication can be used to verify your answer from Part A.

3 x 3000 = 9000
3 x 200 = 600
3 x 90 = 270
3 x 5 = 15

9000 + 600 + 270 + 15 = 9885

Part C
Write a multiplication equation that could be used to verify the answer from Part A. Write only the equation.

3 x 3295 = 9885

ITEM 103

The school librarian needs 52 pairs of headphones to use in the library for next year. She found 7 pairs of headphones that are not broken and could be used again. She plans to order more headphones.

- Each box of headphones contains 3 pairs.
- Each box costs $14 each.

How much will it cost to order the additional pairs of headphones?

It will cost $210 to order the additional pairs of headphones. First I subtracted the 7 pairs that can be used again from the 52 pairs needed. That means the librarian needs to order 45 pairs. If the headphones come in sets of 3, then 45 divided by 3 tells me that she needs to order 15 boxes. If each box costs $14, then 15 x 14 gives the total price.

52 – 7 = 45
45 ÷ 3 = 15
15 x 14 = 210

Number and Operations—Fractions
4.NF.A.01
Items 104 – 111

ITEM 104

A fraction model is shown.

Which other fraction model shows the same shaded portion as the model above?

A.

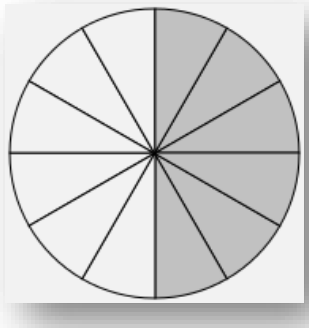
B.

C.

D.

ITEM 105

Use the fraction model to answer the question.



Which one of the choices does **not** name an equivalent fraction for the shaded parts on the fraction model?

A. $\frac{2}{4}$

B. $\frac{3}{6}$

C. $\frac{6}{6}$

D. $\frac{5}{10}$

ITEM 106

Which fraction is equivalent to $\frac{2}{3}$?

A. $\frac{4}{12}$

B. $\frac{6}{10}$

C. $\frac{6}{8}$

D. $\frac{8}{12}$

ITEM 107

Which fraction is equivalent to $\frac{8}{12}$?

A. $\frac{1}{3}$

B. $\frac{2}{3}$

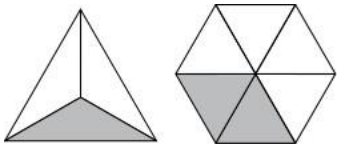
C. $\frac{3}{4}$

D. $\frac{4}{8}$

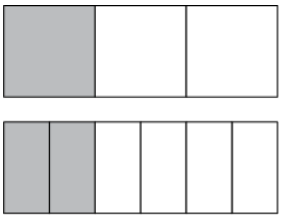
ITEM 108

Which set of pictures best shows why $\frac{1}{3}$ and $\frac{2}{6}$ are equivalent fractions?

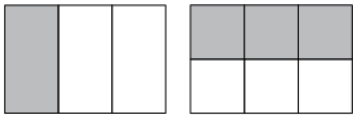
A.



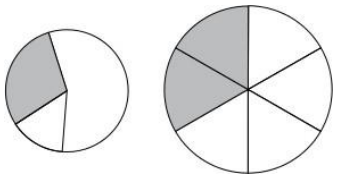
B.



C.



D.



ITEM 109

Which two fractions are equivalent to $\frac{6}{10}$?

A. $\frac{1}{6}$

B. $\frac{3}{10}$

C. $\frac{3}{5}$

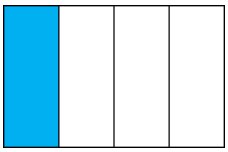
D. $\frac{6}{8}$

E. $\frac{60}{100}$

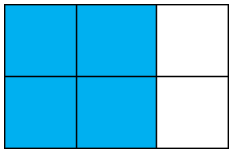
ITEM 110

Which model is shaded to show a fraction that is equivalent to $\frac{1}{3}$?

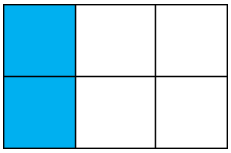
A.



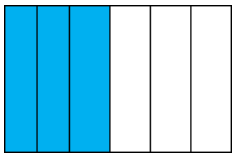
B.



C.



D.



ITEM 111

Which **two** fractions are equivalent to $\frac{4}{10}$?

A. $\frac{1}{4}$

B. $\frac{8}{10}$

C. $\frac{2}{5}$

D. $\frac{4}{100}$

E. $\frac{40}{100}$

Number and Operations—Fractions
4.NF.A.02
Items 112 – 117

ITEM 112

Caroline and Natalie went jogging. The distance Caroline ran was farther than the distance Natalie ran. Natalie jogged $\frac{3}{4}$ of a mile. Which could be the distance Caroline jogged?

A. $\frac{3}{8}$

B. $\frac{1}{2}$

C. $\frac{5}{6}$

D. $\frac{75}{100}$

ITEM 113

Which fraction is less than $\frac{3}{4}$?

A. $\frac{2}{3}$

B. $\frac{3}{3}$

C. $\frac{5}{6}$

D. $\frac{6}{8}$

ITEM 114

There are 2 pizzas of the same size on the counter in the kitchen. Some of each pizza has been eaten. There is $\frac{1}{2}$ of the first pizza left. The second pizza has $\frac{3}{8}$ left.

Which comparison of the two fractions is correct?

A. $\frac{1}{2} > \frac{3}{8}$

B. $\frac{1}{2} < \frac{3}{8}$

C. $\frac{3}{8} > \frac{1}{2}$

D. $\frac{3}{8} = \frac{1}{2}$

ITEM 115

There are 2 cookie cakes of the same size on the kitchen table. Part of each cookie cake has been eaten. There is $\frac{5}{6}$ of the first cookie cake remaining. The second cookie cake has $\frac{2}{10}$ left.

Which comparison of the two fractions is correct?

A. $\frac{2}{10} > \frac{5}{6}$

B. $\frac{2}{10} < \frac{5}{6}$

C. $\frac{2}{10} = \frac{5}{6}$

D. $\frac{5}{6} < \frac{2}{10}$

ITEM 116

The two fourth grade classes that Mrs. McHenry teaches have the same number of students. In the first class, $\frac{8}{12}$ of the students participate in the school's fundraiser. In the second class, $\frac{5}{10}$ of the students participate in the school's fundraiser.

Select the **two** comparisons of the fractions that are correct.

A. $\frac{5}{10} > \frac{8}{12}$

B. $\frac{5}{10} < \frac{8}{12}$

C. $\frac{8}{12} = \frac{5}{10}$

D. $\frac{8}{12} > \frac{5}{10}$

E. $\frac{8}{12} < \frac{5}{10}$

ITEM 117

Kyvan's two dogs each have their own food bowl and both bowls are the same size. Kyvan completely fills the both bowls with dog food each morning. His first dog eats $\frac{2}{3}$ of his dog food. His second dog eats $\frac{1}{5}$ of his dog food.

Which comparison of the fractions is correct?

A. $\frac{2}{3} > \frac{1}{5}$

B. $\frac{2}{3} < \frac{1}{5}$

C. $\frac{1}{5} > \frac{2}{3}$

D. $\frac{1}{5} = \frac{2}{3}$

Number and Operations—Fractions
4.NF.B.03a
Items 118 – 129

ITEM 118

Jamal ate $\frac{3}{8}$ of a whole pizza. Shauna ate $\frac{2}{8}$ of the same pizza. How much of the pizza did they eat altogether?

A. $\frac{1}{8}$

B. $\frac{5}{8}$

C. $\frac{6}{8}$

D. $\frac{5}{16}$

ITEM 119

Angel's mom buys a 12-pack of soft drinks at the grocery store. When she gets home to unload them, she accidentally drops the 12-pack of soft drinks on the floor. $\frac{3}{12}$ of the cans burst open and have to be thrown away. What fraction of the 12-pack remains?

A. $\frac{3}{12}$

B. $\frac{9}{12}$

C. $\frac{12}{12}$

D. $\frac{15}{12}$

ITEM 120

Mariah downloads an app on her phone which takes up $\frac{1}{8}$ of her available storage. She downloads another app that takes up an additional $\frac{3}{8}$ of her available storage. How much of Mariah's storage was taken up by downloading the two apps?

A. $\frac{2}{8}$

B. $\frac{3}{8}$

C. $\frac{4}{8}$

D. $\frac{4}{16}$

ITEM 121

Christian is hungry and decides to eat some of the leftover pizza in his family's refrigerator. There is $\frac{6}{10}$ of a pizza left, and Christian eats $\frac{2}{10}$ of it. How much of the pizza is left for his sister?

A. $\frac{3}{10}$

B. $\frac{4}{0}$

C. $\frac{4}{10}$

D. $\frac{8}{10}$

ITEM 122

Amarion ate $\frac{5}{12}$ of a chocolate bar after school. He ate another $\frac{3}{12}$ of the same chocolate bar after dinner. How much of the chocolate bar did Amarion eat altogether?

A. $\frac{2}{12}$

B. $\frac{8}{12}$

C. $\frac{15}{12}$

D. $\frac{8}{24}$

ITEM 123

Jessa gave $\frac{2}{6}$ of her money to help with the hurricane relief fund. What fraction of her money does she have remaining?

A. $\frac{6}{6}$

B. $\frac{5}{6}$

C. $\frac{4}{6}$

D. $\frac{3}{6}$

ITEM 124

The fourth grade class spends $\frac{2}{5}$ of their field trip identifying animals in a laboratory. The class also spent $\frac{2}{5}$ of their field trip on a nature walk. How much of their field trip was spent identifying animals and going on the nature walk?

A. $\frac{0}{5}$

B. $\frac{4}{5}$

C. $\frac{4}{10}$

D. $\frac{4}{25}$

ITEM 125

Over spring break, Jessa read $\frac{8}{10}$ of her book. What fraction of her book does Jessa have left to read?

A. $\frac{1}{10}$

B. $\frac{2}{10}$

C. $\frac{8}{10}$

D. $\frac{10}{10}$

ITEM 126

It rained $\frac{1}{8}$ inches on Friday, $\frac{3}{8}$ inches on Saturday, and $\frac{2}{8}$ inches on Sunday. How much did it rain altogether over the three days?

A. $\frac{3}{8}$ inches

B. $\frac{5}{8}$ inches

C. $\frac{6}{8}$ inches

D. $\frac{3}{24}$ inches

ITEM 127

Ethan and Chase walk home from school each day. Chase's house is $\frac{40}{100}$ miles from the school. Ethan's house is $\frac{35}{100}$ miles past Chase's house. What is the distance, in miles, from Ethan's house to the school?

A. $\frac{5}{100}$

B. $\frac{65}{100}$

C. $\frac{75}{100}$

D. $\frac{75}{200}$

ITEM 128

Raylon worked the following problem and got an incorrect answer.

$$\frac{4}{4}+\frac{4}{4}+\frac{4}{4}+\frac{3}{4}=\frac{15}{16}$$

Part A
Explain why Raylon's answer is incorrect.

Raylon's answer is incorrect because he added denominators.

Part B
Provide the correct answer and explanation of how you solved the problem.

The correct answer is 15 fourths, or 3¾. I added the number of fourths:
4 fourths + 4 fourths + 4 fourths + 3 fourths = 15 fourths = 15/4 = 3¾

ITEM 129

Which expression could represent a total distance of $\frac{4}{10}$ of a meter?

A. $\frac{10}{10} + \frac{4}{10}$

B. $\frac{10}{10} - \frac{4}{10}$

C. $\frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10}$

D. $\frac{4}{10} + \frac{4}{10} + \frac{4}{10} + \frac{4}{10}$

Number and Operations—Fractions
4.NF.B.03b
Items 130 – 136

ITEM 130

Which expression is equal to $\frac{6}{8}$?

A. $\frac{2}{2}+\frac{2}{2}+\frac{1}{2}+\frac{1}{2}$

B. $\frac{2}{8}+\frac{3}{8}$

C. $\frac{3}{4}+\frac{3}{4}$

D. $\frac{1}{8}+\frac{1}{8}+\frac{2}{8}+\frac{2}{8}$

ITEM 131

Which of the following expressions is **not** equivalent to $\frac{7}{8}$?

A. $\frac{4}{8}+\frac{3}{8}+\frac{1}{8}$

B. $\frac{3}{8}+\frac{3}{8}+\frac{1}{8}$

C. $\frac{5}{8}+\frac{2}{8}$

D. $\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{8}+\frac{1}{8}$

ITEM 132

Which expression does **not** have a value of $\frac{7}{10}$?

A. $\frac{2}{10}+\frac{2}{10}+\frac{3}{10}$

B. $\frac{2}{10}+\frac{3}{10}$

C. $\frac{3}{10}+\frac{4}{10}$

D. $\frac{1}{10}+\frac{1}{10}+\frac{2}{10}+\frac{3}{10}$

ITEM 133

Which expression has a value of $\frac{8}{12}$?

A. $\frac{4}{6}+\frac{4}{6}$

B. $\frac{2}{3}+\frac{1}{4}+\frac{5}{5}$

C. $\frac{3}{12}+\frac{4}{12}$

D. $\frac{2}{12}+\frac{6}{12}$

ITEM 134

Which **two** expressions have a value of $\frac{10}{12}$?

A. $\frac{5}{6}+\frac{5}{6}$

B. $\frac{2}{12}+\frac{8}{12}$

C. $\frac{6}{12}+\frac{6}{12}$

D. $\frac{4}{12}+\frac{5}{12}+\frac{1}{12}$

E. $\frac{4}{5}+\frac{2}{5}+\frac{4}{4}$

ITEM 135

Select **two** correct answers that decomposes $2\frac{2}{4}$.

A. $\frac{4}{4}+\frac{4}{4}+\frac{1}{4}+\frac{1}{4}$

B. $\frac{2}{4}+\frac{2}{4}+\frac{1}{4}$

C. $\frac{1}{4}+\frac{1}{4}+\frac{1}{4}$

D. $1+1+\frac{1}{4}+\frac{1}{4}$

E. $\frac{4}{4}+\frac{4}{4}+\frac{4}{4}+\frac{1}{4}$

ITEM 136

Select **two** correct answers that decomposes $\frac{9}{12}$.

A. $\frac{6}{12}+\frac{1}{12}+\frac{1}{12}$

B. $\frac{5}{12}+\frac{2}{12}+\frac{2}{12}$

C. $\frac{2}{12}+\frac{2}{12}+\frac{2}{12}+\frac{2}{12}$

D. $\frac{1}{12}+\frac{1}{12}+\frac{1}{12}+\frac{1}{12}+\frac{1}{12}+\frac{1}{12}+\frac{3}{12}$

E. $\frac{3}{12}+\frac{3}{12}$

Number and Operations—Fractions
4.NF.B.03c
Items 137 – 146

ITEM 137

Evaluate: $2\frac{3}{6} + 1\frac{4}{6}$

A. $1\frac{1}{6}$

B. $3\frac{1}{6}$

C. $4\frac{1}{6}$

D. $4\frac{7}{6}$

ITEM 138

Evaluate: $2\frac{4}{8} + 1\frac{2}{8}$

A. $\frac{9}{8}$

B. $3\frac{6}{8}$

C. $3\frac{8}{8}$

D. $3\frac{6}{16}$

ITEM 139

Evaluate: $3\frac{2}{8} + 5\frac{4}{8}$

A. $2\frac{2}{8}$

B. $8\frac{2}{8}$

C. $8\frac{6}{8}$

D. $8\frac{6}{16}$

ITEM 140

Evaluate: $8\frac{2}{4} - 5\frac{3}{4}$

A. $3\frac{1}{4}$

B. $2\frac{3}{4}$

C. $3\frac{2}{4}$

D. $14\frac{1}{4}$

ITEM 141

Evaluate: $3\frac{5}{12} + 6\frac{6}{12}$

A. $9\frac{11}{12}$

B. $9\frac{12}{12}$

C. $9\frac{11}{24}$

D. $18\frac{11}{12}$

ITEM 142

Evaluate: $7\frac{2}{10} - 2\frac{4}{10}$

A. $4\frac{2}{10}$

B. $4\frac{8}{10}$

C. $5\frac{2}{10}$

D. $5\frac{8}{10}$

ITEM 143

Evaluate: $3\frac{1}{5} + 3\frac{4}{5}$

A. $6\frac{5}{10}$

B. $6\frac{4}{5}$

C. 7

D. 10

ITEM 144

Evaluate: $4\frac{6}{8} + 5\frac{2}{8}$

A. $1\frac{4}{8}$

B. $9\frac{4}{8}$

C. $9\frac{8}{16}$

D. 10

:

ITEM 145

Evaluate: $6\frac{2}{6} - 4\frac{4}{6}$

A. $1\frac{4}{6}$

B. $2\frac{2}{0}$

C. $2\frac{2}{6}$

D. 11

ITEM 146

Evaluate: $9\frac{6}{12} - 8\frac{10}{12}$

A. $\frac{4}{12}$

B. $\frac{8}{12}$

C. $1\frac{4}{0}$

D. $1\frac{4}{12}$

Number and Operations—Fractions
4.NF.B.03d
Items 147 – 155

ITEM 147

Pablo and Latisha build a figure with blocks. In the figure, $\frac{7}{12}$ of the blocks are blue and $\frac{3}{12}$ of the blocks are red.

What fraction represents how many more blocks are blue than red?

A. $\frac{4}{12}$

B. $\frac{10}{12}$

C. $\frac{12}{12}$

D. $\frac{21}{12}$

ITEM 148

Connor, Simon, and Bobby are playing with baseball cards. Connor takes $\frac{4}{10}$ of the cards, Simon takes $\frac{2}{10}$ of the cards, and Bobby takes the rest of the cards.

What fraction of the baseball cards are left for Bobby?

A. $\frac{2}{10}$

B. $\frac{4}{10}$

C. $\frac{6}{10}$

D. $\frac{8}{10}$

ITEM 149

Shawnay feeds the fish at an aquarium each day. In the morning, she feeds them $\frac{3}{8}$ of a cup of fish food. In the afternoon, she feeds them $\frac{4}{8}$ of a cup of fish food.

How many more cups of fish food does Shawnay feed the fish in the afternoon than in the morning?

A. $\frac{1}{8}$

B. $\frac{7}{8}$

C. $\frac{7}{16}$

D. $\frac{12}{64}$

ITEM 150

Kyle, Logan, and Ortiz were working on a puzzle together. Kyle put $\frac{4}{12}$ of the puzzle together. Logan put $\frac{2}{12}$ of the puzzle together. Ortiz put $\frac{3}{12}$ of the puzzle together.

What fraction of the puzzle still needs to be put together?

A. $\frac{3}{12}$

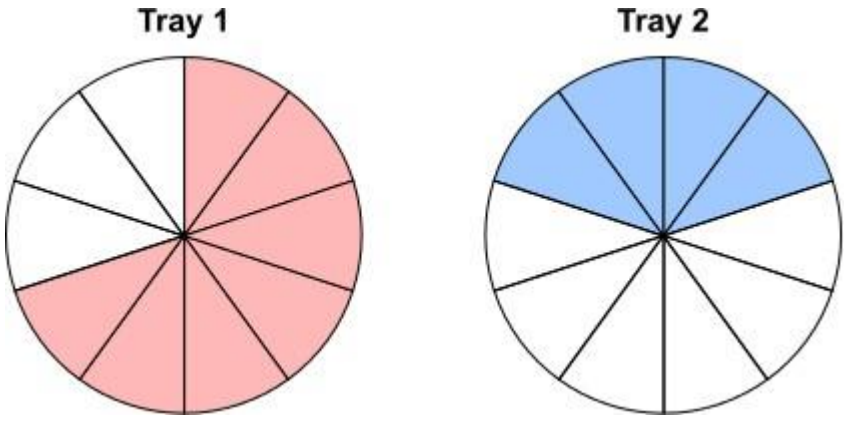
B. $\frac{5}{12}$

C. $\frac{9}{12}$

D. $\frac{12}{12}$

ITEM 151

Mrs. Cheramie served two identical trays of vegetables. The shaded part shows the fraction of the vegetables that were left on each tray.



Which equation can be used to find how much **more** was eaten from tray 2 than tray 1?

A. $\frac{4}{10} + \frac{7}{10} = \frac{11}{10}$

B. $\frac{3}{10} - \frac{6}{10} = \frac{3}{10}$

C. $\frac{6}{10} + \frac{3}{10} = \frac{9}{10}$

D. $\frac{6}{10} - \frac{3}{10} = \frac{3}{10}$

ITEM 152

Lillie's dad brought home a dozen donuts for breakfast. Lillie ate $\frac{4}{12}$ of the donuts. Niklass ate one more donut than Lillie.

What fraction represents the number of donuts left?

A. $\frac{3}{12}$

B. $\frac{5}{12}$

C. $\frac{8}{12}$

D. $\frac{9}{12}$

ITEM 153

Tammi put $\frac{1}{6}$ cup of pinto beans into a container that holds 1 cup. After she added more pinto beans, the container was full.

Which amount of pinto beans did Tammi add?

A. $\frac{2}{6}$ cup

B. $\frac{3}{6}$ cup

C. $\frac{4}{6}$ cup

D. $\frac{5}{6}$ cup

ITEM 154

Airianna and her mom are making a fruit punch for her aunt's baby shower. The recipe calls for $3\frac{3}{6}$ quarts of pineapple juice and $2\frac{1}{6}$ quarts of cranberry juice.

How many quarts of punch will this recipe make?

A. $1\frac{2}{6}$

B. $1\frac{4}{6}$

C. $5\frac{4}{6}$

D. $5\frac{4}{12}$

ITEM 155

Mrs. Polk is using construction paper for a project in art class.

- Each project will use $\frac{1}{4}$ of a piece of construction paper.
- Each 4th grade student will create 3 projects in her class during the week.
- The 5th grade class will also create 3 projects and use 2 times the number of $\frac{1}{4}$ pieces of construction paper for their projects than the 4th graders.

Part A
Write an equation to determine the amount of construction paper needed for one 4th grader to do the project.

¼ x 3 = ¾
One 4th grader needs ¾ of a sheet of construction paper for the project next week.

Part B
Write an equation to determine the amount of construction paper needed for one 5th grader to do the project.

2 x 3 x ¼ = 6 x ¼ = 6/4 = 1 2/4 = 1½
Each 5th grader needs 1½ sheets of construction paper to do the project.

Part C
Write an equation to determine the total amount of construction paper that will be needed for one 4th grader and one 5th grader to complete the art project.

(¼ x 3) + (¼ x 6) = ¾ + 6/4 = 9/4 = 2¼
2¼ sheets of construction paper are needed for a 4th and 5th grader to do their art project.

Number and Operations—Fractions
4.NF.B.04a
Items 156 – 165

ITEM 156

Which expression is equivalent to $\frac{4}{10}$?

A. $4 \times \frac{1}{10}$

B. $\frac{1}{4} \times 10$

C. $\frac{2}{5} \times \frac{2}{5}$

D. $\frac{1}{10} + 4$

ITEM 157

Which expression is equivalent to $\frac{8}{10}$?

A. $\frac{1}{10} + 8$

B. $8 \times \frac{1}{10}$

C. $\frac{1}{8} \times 10$

D. $\frac{4}{5} \times \frac{4}{5}$

ITEM 158

Which expression is another way to write $\frac{8}{12}$?

A. $\frac{1}{8} \times 12$

B. $\frac{1}{12} \times 8$

C. $8 + \frac{1}{12}$

D. $\frac{1}{8} + \frac{1}{12}$

ITEM 159

Which one of the following equations represents this diagram?

A. $3 \times \frac{6}{8} = \frac{18}{8}$

B. $6 \times \frac{1}{8} = \frac{6}{8}$

C. $6 \times \frac{6}{8} = \frac{36}{8}$

D. $3 \times \frac{1}{8} = \frac{3}{8}$

ITEM 160

Which one of the following equations represents this diagram?

A. $4 \times \frac{8}{6} = \frac{32}{6}$

B. $8 \times \frac{8}{6} = \frac{64}{6}$

C. $4 \times \frac{1}{6} = \frac{4}{6}$

D. $8 \times \frac{1}{6} = \frac{8}{6}$

ITEM 161

Which one of the following equations represents this diagram?

A. $5 \times \frac{1}{6} = \frac{5}{6}$

B. $5 \times \frac{5}{6} = \frac{5}{6}$

C. $2 \times \frac{2}{6} = \frac{4}{6}$

D. $5 \times \frac{5}{6} = \frac{25}{6}$

ITEM 162

Which one of the following equations represents this diagram?

A. $3 \times \frac{3}{4} = \frac{3}{4}$

B. $3 \times \frac{1}{3} = \frac{3}{4}$

C. $2 \times \frac{1}{4} = \frac{2}{4}$

D. $3 \times \frac{1}{4} = \frac{3}{4}$

ITEM 163

Which **two** of the following equations represent this diagram?

A. $\frac{6}{4} = 6 \times \frac{1}{4}$

B. $\frac{6}{4} = 6 \times \frac{6}{4}$

C. $\frac{6}{4} = 2 \times \frac{3}{4}$

D. $\frac{4}{4} = 2 \times \frac{2}{4}$

E. $\frac{3}{4} = 3 \times \frac{1}{4}$

ITEM 164

Which **two** of the following equations represent this diagram?

A. $\frac{4}{4} = 2 \times \frac{2}{4}$

B. $\frac{2}{4} = 2 \times \frac{2}{4}$

C. $\frac{4}{4} = 4 \times \frac{1}{4}$

D. $\frac{4}{4} = 4 \times \frac{4}{4}$

E. $\frac{3}{4} = 3 \times \frac{1}{4}$

ITEM 165

Which **three** of the following equations represent this diagram?

A. $2 \times \frac{6}{8} = \frac{12}{8}$

B. $12 \times \frac{1}{8} = \frac{12}{8}$

C. $6 \times \frac{6}{8} = \frac{12}{8}$

D. $2 \times \frac{6}{6} = \frac{12}{6}$

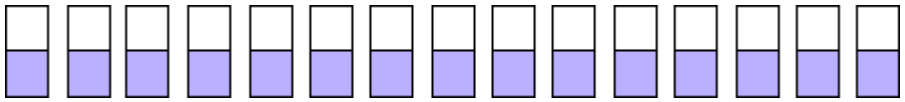
E. $12 \times \frac{6}{8} = \frac{12}{8}$

Number and Operations—Fractions
4.NF.B.04b
Items 166 – 170

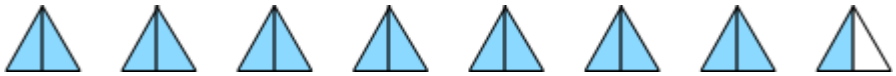
ITEM 166

Which fraction model **cannot** be used to represent $5 \times \frac{3}{2}$?

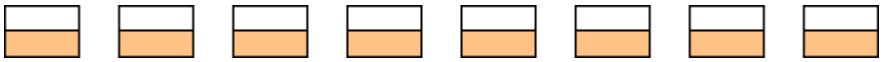
A.



B.



C.



D.

ITEM 167

Which expression is equivalent to $8 \times \frac{2}{3}$?

A. $4 \times \frac{1}{3}$

B. $6 \times \frac{1}{3}$

C. $10 \times \frac{1}{3}$

D. $16 \times \frac{1}{3}$

ITEM 168

Which expression is equivalent to $3 \times \frac{4}{7}$?

A. $4 \times \frac{2}{7}$

B. $6 \times \frac{2}{7}$

C. $2 \times \frac{4}{7}$

D. $11 \times \frac{1}{7}$

ITEM 169

Which expression is equivalent to $6 \times \frac{2}{3}$?

A. $3 \times \frac{1}{3}$

B. $6 \times \frac{1}{3} \times \frac{1}{3}$

C. $8 \times \frac{1}{3}$

D. $12 \times \frac{1}{3}$

ITEM 170

Find the value of $4 \times \frac{3}{4}$.

A. $\frac{12}{16}$

B. $\frac{7}{4}$

C. 3

D. 4

Number and Operations—Fractions
4.NF.B.04c
Items 171 – 185

ITEM 171

Jobe has four puppies. Each puppy gets $\frac{3}{4}$ of a scoop of food. How many scoops of food does Jobe need to feed all four puppies?

A. $\frac{12}{16}$

B. $\frac{7}{4}$

C. 3

D. 4

ITEM 172

It snowed $\frac{5}{6}$ of an inch each night for 5 nights. How much snow fell on all 5 nights?

A. $\frac{10}{11}$ inch

B. $1\frac{4}{6}$ inches

C. $4\frac{1}{6}$ inches

D. $5\frac{5}{6}$ inches

ITEM 173

Charlotte chews $\frac{5}{10}$ of a pack of gum each week. How much gum will she chew in 4 weeks?

A. $\frac{9}{10}$ of a pack of gum

B. $\frac{20}{40}$ of a pack of gum

C. 2 packs of gum

D. 3 packs of gum

ITEM 174

Mrs. Robinson has 1 container of strawberries. She is making snacks for 3 days. Each snack uses $\frac{2}{8}$ of the container. How much of the container will she use to make snacks for all 3 days?

A. $\frac{6}{8}$ of the container

B. $\frac{6}{12}$ of the container

C. $\frac{6}{24}$ of the container

D. $\frac{8}{32}$ of the container

ITEM 175

Liam puts $\frac{3}{12}$ of a box of crayons on each desk in his class. There are 7 desks. How many boxes of crayons will Liam need?

A. between 0 and 1 box

B. between 1 and 2 boxes

C. between 2 and 3 boxes

D. between 4 and 5 boxes

ITEM 176

Farmer Brown uses $\frac{7}{8}$ of a bucket of chicken feed every morning. How many buckets of chicken feed does Farmer Brown use to feed his chickens for 12 days?

A. between 1 and 2 buckets

B. between 2 and 3 buckets

C. between 10 and 11 buckets

D. between 12 and 13 buckets

ITEM 177

Noah uses $\frac{4}{5}$ of a liter of water every day for his plants. How much water does Noah use in one week?

A. between 1 liter and 2 liters

B. between 2 liters and 3 liters

C. between 4 liters and 5 liters

D. between 5 liters and 6 liters

ITEM 178

Adam and Katherine searched for blackberries on Sunday afternoon. They found 10 blackberries and together ate $\frac{4}{5}$ of them. How many blackberries did Adam and Katherine eat altogether?

A. 1 blackberry

B. 6 blackberries

C. 8 blackberries

D. 9 blackberries

ITEM 179

Natali, Marsha, and 5 other girls are attending a party. If each girl will drink $\frac{2}{5}$ of a glass of lemonade, how much lemonade will the girls drink in all?

A. $\frac{9}{10}$ of a glass of lemonade

B. $1\frac{4}{5}$ glasses of lemonade

C. 2 glasses of lemonade

D. $2\frac{4}{5}$ glasses of lemonade

ITEM 180

Six friends each get $\frac{3}{8}$ of a pound of candy. How much candy will the friends get in all?

A. $\frac{18}{48}$ of a pound of candy

B. $\frac{9}{14}$ of a pound of candy

C. $\frac{9}{8}$ pounds of candy

D. $\frac{18}{8}$ pounds of candy

ITEM 181

Bryce collected 3 times as many bags of rocks as Eddie. If Eddie collected $\frac{3}{4}$ of a bag, how many bags did Bryce collect?

A. $\frac{9}{12}$

B. $\frac{6}{7}$

C. $\frac{6}{4}$

D. $\frac{9}{4}$

ITEM 182

Jose had 12 books on his bookshelf. His sister gave him three more books for his birthday. Now, $\frac{2}{3}$ of all of Jose's books are mysteries. How many mystery books does Jose have?

A. 4 books

B. 5 books

C. 8 books

D. 10 books

ITEM 183

Nora and Ziphrina are making homemade brownies for their after-school social event. They determined that they need to make 12 batches of the homemade brownies. If each batch needs $\frac{1}{3}$ cup of chocolate chips, how many cups of chocolate chips will be used altogether?

A. 3 cups

B. 4 cups

C. 9 cups

D. 12 cups

ITEM 184

Paula makes 4 sweaters. It takes $\frac{4}{5}$ of a yard of yarn to make each sweater. How much yarn, in yards, does Paula need to make all 4 sweaters?

A. $4\frac{4}{5}$

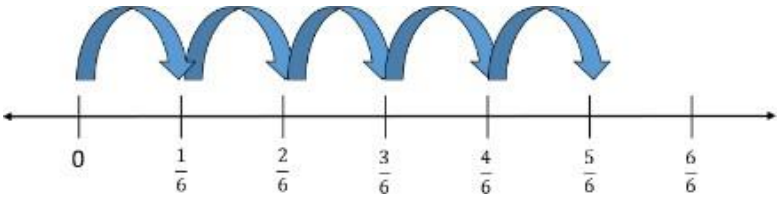
B. $3\frac{1}{5}$

C. $2\frac{1}{5}$

D. $2\frac{2}{5}$

ITEM 185

Angie read $\frac{1}{6}$ of her book each day. The number line shows how much of her book she read in five days.



Which equation shows how much of her book was read in five days?

A. $5 \times \frac{1}{6} = \frac{5}{6}$

B. $5 \times \frac{5}{6} = \frac{25}{6}$

C. $5 \times \frac{6}{6} = \frac{30}{6}$

D. $\frac{5}{6} + \frac{1}{6} = \frac{6}{6}$

Number and Operations—Fractions
4.NF.C.05
Items 186 – 194

ITEM 186

Evaluate: $\frac{1}{10}+\frac{7}{10}+\frac{5}{100}+\frac{4}{100}$

A. $\frac{1{,}754}{220}$

B. $\frac{17}{220}$

C. $\frac{89}{10}$

D. $\frac{89}{100}$

ITEM 187

Which fraction is equivalent to $\frac{3}{10}$?

A. $\frac{30}{10}$

B. $\frac{3}{100}$

C. $\frac{30}{100}$

D. $\frac{30}{1000}$

ITEM 188

Add: $\frac{5}{10} + \frac{32}{100}$

A. $\frac{37}{100}$

B. $\frac{37}{110}$

C. $\frac{82}{100}$

D. $\frac{532}{110}$

ITEM 189

Add: $\frac{8}{10} + \frac{19}{100}$

A. $\frac{99}{100}$

B. $\frac{99}{110}$

C. $\frac{27}{110}$

D. $\frac{27}{100}$

ITEM 190

Which fraction is equivalent to $\frac{7}{10}$?

A. $\frac{7}{100}$

B. $\frac{70}{100}$

C. $\frac{7}{1}$

D. $\frac{70}{1}$

ITEM 191

Which steps show how to add $\frac{6}{10} + \frac{3}{100}$?

A. $\frac{6}{10} + \frac{3}{100} = \frac{6+3}{10+100}$

B. $\frac{6}{10} + \frac{3}{100} = \frac{3}{5} + \frac{3}{100} = \frac{3+3}{5+100}$

C. $\frac{6}{10} + \frac{3}{100} = \frac{60}{100} + \frac{3}{100} = \frac{60+3}{100}$

D. $\frac{6}{10} + \frac{3}{100} = \frac{60}{100} + \frac{3}{100} = \frac{60+3}{100+100}$

ITEM 192

Which equation may be used to evaluate $\frac{5}{10} + \frac{6}{100}$?

A. $\frac{5}{10} + \frac{6}{100} = \frac{50}{100} + \frac{60}{100}$

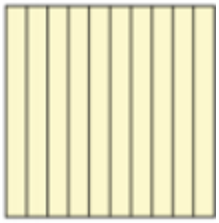
B. $\frac{5}{10} + \frac{6}{100} = \frac{50}{100} + \frac{6}{100}$

C. $\frac{5}{10} + \frac{6}{100} = \frac{50 + 6}{100 + 100}$

D. $\frac{5}{10} + \frac{6}{100} = \frac{5 + 6}{10 + 100}$

ITEM 193

Use the following model for your explanations in Parts A, B, and C.



Part A

Explain how to use the model to represent $\frac{7}{10}$.

To show 7/10 in the model, shade 7 out of the 10 columns.

Part B

Explain how to use the model to show that $\frac{7}{10} = \frac{70}{100}$.

To show that 7/10 and 70/100 are equivalent fractions, divide the 10 columns horizontally into 10 rows. Now there are 100 squares, and 70 out of 100 are shaded.

Part C

Explain how to use the model to add $\frac{6}{10} + \frac{15}{100}$. Provide the sum in your explanation.

6/10 is the same as 60/100. Add 15/100 to 60/100 and the sum is 75/100.
6/10 is the same as 6 columns. Shade 6 columns. Then split the columns into 10 rows. Now 60 squares are shaded out of 100. Shade an additional 15 squares. Now 60 + 15 = 75 squares are shaded out of 100 squares total.

ITEM 194

A student completed the following equation:

$$\frac{8}{10} + \frac{8}{100} = ?$$

$$\frac{8}{10} + \frac{8}{10} = \frac{16}{10}$$

Part A
Explain how you know the equation is not correct.

This student understands that only denominators can be added, but he does not correctly rewrite either fraction so that they can be added together. Plus, I know that 8/10 + 8/100 is less than 1, and the student's answer is greater than 1.

Part B
Explain how to correctly solve the expression. Provide the correct sum in your explanation.

8/10 = 80/100
80/100 + 8/100 = 88/100

Number and Operations—Fractions
4.NF.C.06
Items 195 – 203

ITEM 195

What is $\frac{12}{100}$ written as a decimal?

A. 0.12

B. 1.02

C. 1.2

D. 12.100

ITEM 196

What decimal is equivalent to $\frac{3}{10}$?

A. 30

B. 3

C. 0.3

D. 0.03

ITEM 197

What is 0.7 written as a fraction?

A. $\frac{7}{100}$

B. $\frac{100}{7}$

C. $\frac{7}{10}$

D. $\frac{10}{7}$

ITEM 198

Which fraction is equivalent to 0.20?

A. $\frac{2}{100}$

B. $\frac{50}{100}$

C. $\frac{8}{10}$

D. $\frac{2}{10}$

ITEM 199

Which fraction is equivalent to 0.50?

A. $\frac{50}{100}$

B. $\frac{5}{100}$

C. $\frac{10}{5}$

D. $\frac{50}{10}$

ITEM 200

Which decimal is equal to $\frac{2}{10}$?

A. 0.21

B. 0.2

C. 2

D. 2.1

ITEM 201

Which decimal is equal to $\frac{6}{10}$?

A. 10.6

B. 6.10

C. 0.6

D. 0.16

ITEM 202

Point T is located on the number line.

Which decimal does point T represent?

A. 67

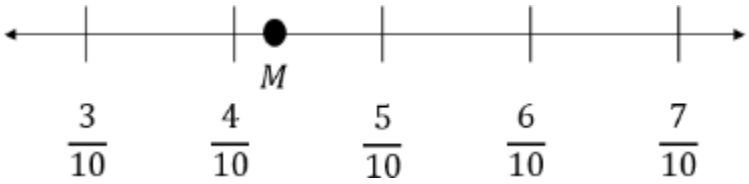
B. 6.7

C. 0.65

D. 0.67

ITEM 203

Point M is located on the number line.



What decimal does point M represent?

A. 0.40

B. 0.42

C. 0.5

D. 4.0

Number and Operations—Fractions
4.NF.C.07
Items 204 – 212

ITEM 204

In Mr. Paulson's class, 0.5 of the students ate pizza for lunch. In Ms. Hugo's class, 0.5 of the students ate hamburgers for lunch.

What information, if any, is needed to correctly compare the 0.5 of Mr. Paulson's class that ate pizza to the 0.5 of Ms. Hugo's class that ate hamburgers?

A. whether the lunches were eaten on the same day

B. the total number of students in each teacher's class

C. nothing because the portions each class ate were the same

D. the total number of pizza slices and hamburgers eaten that day

ITEM 205

Which comparison is **true**?

A. $0.48 < 0.48$

B. $0.75 > 0.72$

C. $3.8 < 3.28$

D. $4.01 > 4.09$

ITEM 206

Which comparison is **false**?

A. $0.35 < 0.45$

B. $0.49 > 0.40$

C. $1.32 > 1.23$

D. $1.58 > 1.85$

ITEM 207

Compare the two values using <, >, or =.

0.6 _____ 0.60

A. <

B. >

C. =

ITEM 208

Which decimal comparison is correct?

A. 0.15 = 0.5

B. 0.5 < 0.15

C. 0.15 > 0.5

D. 0.5 > 0.15

ITEM 209

Which statement correctly compares the values of 1.46 and 0.92?

A. 1.46 < 0.92 because 4 tenths is less than 9 tenths.

B. 1.46 < 0.92 because 46 is a smaller number than 92.

C. 1.46 > 0.92 because 6 hundredths is more than 2 hundredths.

D. 1.46 > 0.92 because 1 whole is more than 0.

ITEM 210

Which decimal comparison is correct?

A. $0.18 = 0.8$

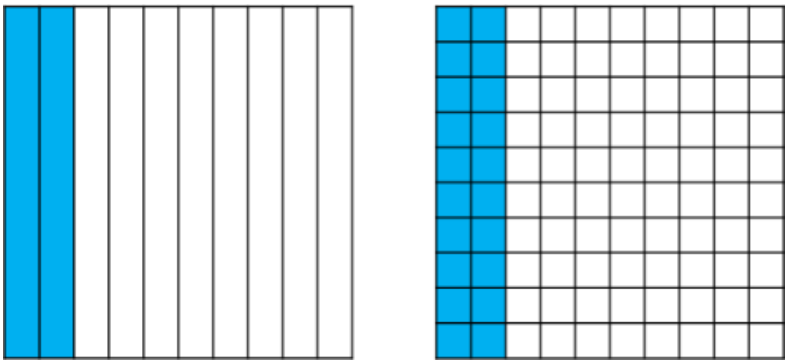
B. $0.8 > 0.18$

C. $0.18 > 0.18$

D. $0.8 < 0.18$

ITEM 211

Which decimal comparison is shown by these two models?



A. 0.2 > 0.20

B. 0.2 < 0.20

C. 0.2 = 0.20

D. 2.0 = 20

ITEM 212

Which symbol goes in the blank to make the comparison true?

0.68 _____ 0.7

A. <

B. >

C. =

Measurement and Data
4.MD.A.01
Items 213 – 218

ITEM 213

A bridge is 4 kilometers long. What is the length of the bridge in meters?

A. 40 meters

B. 400 meters

C. 4,000 meters

D. 40,000 meters

ITEM 214

How many ounces are in 7 pounds?

A. 112 ounces

B. 128 ounces

C. 144 ounces

D. 160 ounces

ITEM 215

How many meters are in 2 kilometers?

A. 20 meters

B. 200 meters

C. 2,000 meters

D. 20,000 meters

ITEM 216

How many centimeters are in 6 meters?

A. 6,000

B. 600

C. 60

D. 6

ITEM 217

How many centimeters are in 5 meters?

A. 5

B. 50

C. 500

D. 5,000

ITEM 218

The length of a pole is 9 feet. How many inches long is the pole?

Enter the correct number in the blank.

_108__

Measurement and Data
4.MD.A.02
Items 219 – 233

ITEM 219

Tafari runs 4 kilometers every morning to get ready for a race. How many meters does Tafari run in one week?

A. 28 meters

B. 2,800 meters

C. 4,000 meters

D. 28,000 meters

ITEM 220

A movie starts at 7:05 P.M. Damian lives 25 minutes away from the movie theater. He wants to arrive at the theater 15 minutes before the movie starts. What time should Damian leave his house?

A. 6:25 p.m.

B. 6:40 p.m.

C. 6:50 p.m.

D. 6:55 p.m.

ITEM 221

Andy and his sister are going to play a game. They need to change all of their money to nickels to play the game. They have a one-dollar bill, a quarter, two dimes, and three nickels.

After Andy changes the money to nickels, he still has the same amount of money. He gives half of the nickels to his sister and keeps half to play the game. How many nickels did Andy give his sister?

A. 15 nickels

B. 16 nickels

C. 26 nickels

D. 32 nickels

ITEM 222

On Saturday Lily was a referee at 3 soccer games. She arrived at the soccer field 15 minutes before the first game. Each game lasted for $1\frac{1}{2}$ hours. There were 5 minutes between each game. Lily left 10 minutes after the last game.

How long, in minutes, was Lily at the soccer field?

A. 300 minutes

B. 305 minutes

C. 310 minutes

D. 315 minutes

ITEM 223

Shannon threw a paper airplane 4 meters. Miquel threw his paper plane 7 meters. How much farther, in **centimeters**, did Miquel throw his plane?

A. 3

B. 11

C. 300

D. 1,100

ITEM 224

The Rhine River in Europe is about 4,923 miles long. The Red River in the United States is about 2,487 miles long.

What is the difference, in miles, between the two lengths?

Enter the correct number in the blank.

_2436_

ITEM 225

A chef has 4 grams of salt. He uses 230 milligrams to season a soup that he is cooking. How many milligrams of salt does the chef have left?

Enter the correct number in the blank.

_3770_

ITEM 226

John buys a bag of 16 apples for $7.00. John will sell the apples for $2.00 each at the market. How much profit, in dollars, will John earn if he sells all of the apples?

Enter the correct number in the blank.

_25_

ITEM 227

James ran a race in 1 hour 30 minutes. The race started at 11:30 A.M. What time did James finish the race?

A. 1:00 a.m.

B. 11:00 a.m.

C. 1:00 p.m.

D. 3:00 p.m.

ITEM 228

Axil's plane left at 5:27 P.M. and arrived at 8:14 P.M. on the same day. He stayed in the same time zone. How long was the flight?

A. 2 hours 13 minutes

B. 2 hours 47 minutes

C. 3 hours 13 minutes

D. 13 hours 41 minutes

ITEM 229

Samuel pours $3\frac{4}{6}$ cups of dark chocolate chips into a bowl. He adds $2\frac{3}{6}$ cups of white chocolate chips to the same bowl. How many total cups of chocolate chips does Samuel have in the bowl?

A. $5\frac{1}{6}$

B. $5\frac{7}{12}$

C. 6

D. $6\frac{1}{6}$

ITEM 230

Lori bought a roll of ribbon that contained $5\frac{2}{10}$ feet of ribbon. Lori used $3\frac{6}{10}$ feet when making dresses. How much ribbon, in feet, does Lori have left?

A. $1\frac{4}{10}$

B. $1\frac{6}{10}$

C. $2\frac{4}{10}$

D. $2\frac{6}{10}$

ITEM 231

Trey went to the store and bought 3 bags of chips, 4 candy bars, and 1 drink. The table shows the cost of each item.

Item	Cost
Chips	$3.00
Candy Bar	$2.00
Drink	$1.00

If Trey pays with a $20 bill, how much change will he receive?

A. $2

B. $3

C. $6

D. $14

ITEM 232

Jacob ran 1 kilometer and 325 meters during track practice. Grayson ran 2 kilometers and 475 meters during practice. How many more meters did Grayson run than Jacob?

A. 150

B. 250

C. 1,140

D. 1,150

ITEM 233

Melissa's box of fiction books has a mass of 3 kilograms. Her box of graphic novels has a mass 5 kilograms. What is the combined mass, in **grams**, for both boxes?

A. 200

B. 800

C. 7,000

D. 8,000

Measurement and Data
4.MD.A.03
Items 234 – 242

ITEM 234

Joey created a painting that is 13 inches long and 11 inches wide. Willow created a painting that is 17 inches long and 12 inches wide. How much greater is the area of Willow's painting than the area of Joey's painting?

A. 143 square inches

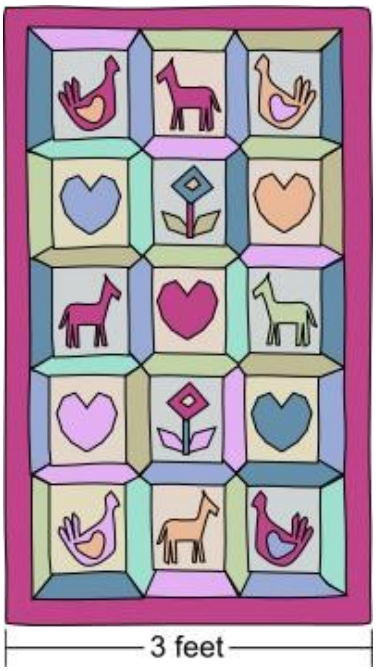
B. 61 square inches

C. 53 square inches

D. 10 square inches

ITEM 235

Carl's mother made him a quilt.



The area of the quilt is 15 square feet. What is the perimeter of the quilt?

A. 5 feet

B. 8 feet

C. 15 feet

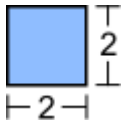
D. 16 feet

ITEM 236

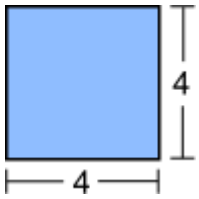
Ben has a rectangle. The value of the area of his rectangle is equal to half of the value of the perimeter of his rectangle.

Which one of the following could be Ben's rectangle?

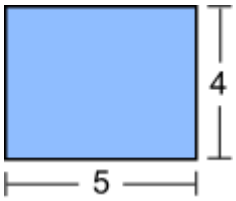
A.



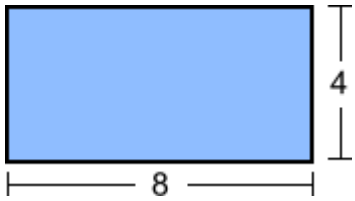
B.



C.



D.



ITEM 237

A rectangle is 4 inches wide. The rectangle is twice as long as it is wide.
What is the area, in square inches, of the rectangle?

A. 8 square inches

B. 16 square inches

C. 24 square inches

D. 32 square inches

ITEM 238

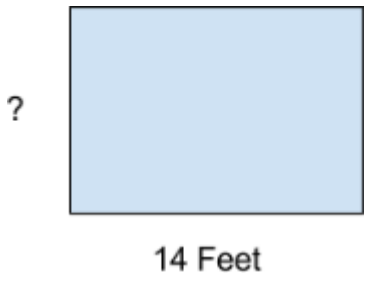
Mary's living room has an area of 72 square feet. The width of the living room is 8 feet. What is the length, in feet, of the living room?

Enter the correct number in the blank.

_9__

ITEM 239

The area of Dave's rectangular yard is 126 square feet. The yard has a width of 14 feet. What is the length, in feet, of Dave's yard?



Enter the correct number in the blank.

9

ITEM 240

Miranda's rectangular painting has a perimeter of 40 inches. The width of the painting is 8 inches. What is the length of the painting?

A. 5 inches

B. 12 inches

C. 24 inches

D. 32 inches

ITEM 241

Julia has a rectangular vegetable garden. The width of her garden is 4 feet. Julia used 32 feet of wooden planks to go around the garden. What is the length, in feet, of Julia's garden?

A. 72

B. 24

C. 12

D. 8

ITEM 242

Mr. Holland purchased new carpet for the rectangular music room at Apple Tree Elementary School. The music room measures 18 feet in length and 15 feet in width. What is the area, in square feet, of the music room?

A. 66

B. 170

C. 180

D. 270

Measurement and Data
4.MD.B.04
Items 243 – 246

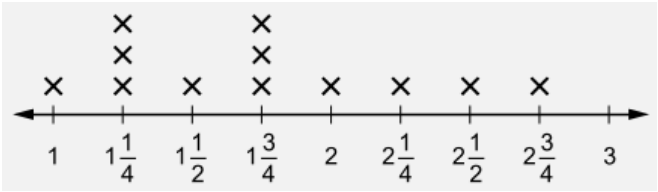
ITEM 243

The list shows the length in inches of some leaves found in the school yard:

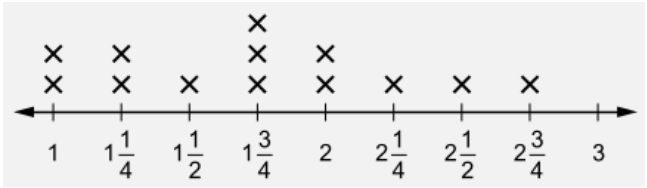
$1\frac{3}{4},\ 1,\ 1\frac{1}{2},\ 1\frac{1}{4},\ 2\frac{1}{2},\ 2,\ 1\frac{3}{4},\ 1\frac{1}{4},\ 2,\ 1\frac{3}{4},\ 1\frac{1}{4},\ 1\frac{1}{4}$

Which line plot correctly shows the number of leaves for each of the lengths?

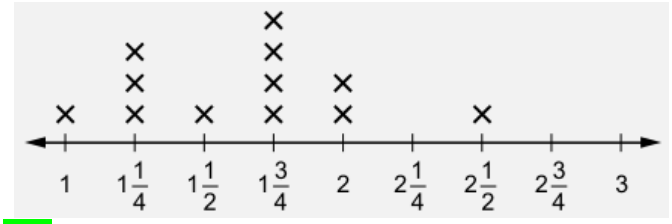
A.



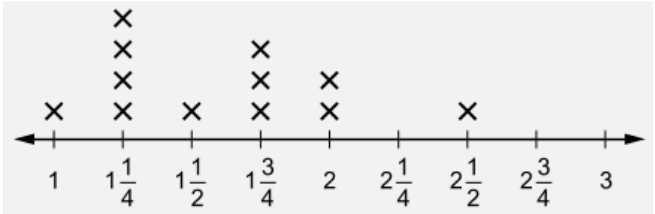
B.



C.

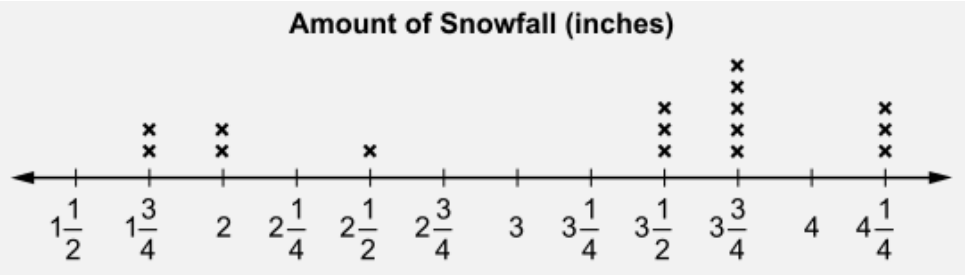


D.



ITEM 244

Barrie records the snowfall amounts for a particular day in 16 cities in the line plot.



How many more inches of snow did a city with the most snowfall receive than a city with the least snowfall?

A. $1\frac{1}{4}$

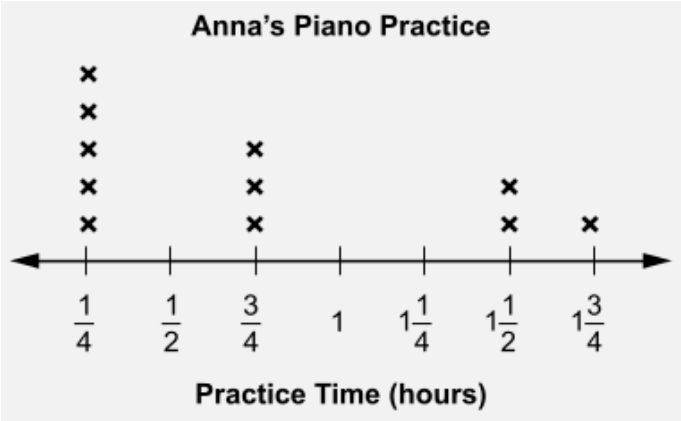
B. $2\frac{1}{2}$

C. $2\frac{3}{4}$

D. $3\frac{1}{2}$

ITEM 245

The amount of time, in hours, that Anna practiced the piano each day for 11 days is shown on the line plot below.



How many hours in total did Anna practice the piano over the 11 days?

A. $4\frac{1}{4}$

B. $6\frac{3}{4}$

C. $7\frac{3}{4}$

D. $8\frac{1}{4}$

ITEM 246

Liam created a line plot to record the distance in miles he runs each day during track practice.

What is the total distance in miles Liam ran during the 10 days of track practice?

A. 10 miles

B. 14 miles

C. $16\frac{1}{4}$ miles

D. $23\frac{1}{4}$ miles

Measurement and Data
4.MD.C.05b
Item 247

ITEM 247

Raymond drew an angle that measures 3 degrees. Which expression is equivalent to the measure of Raymond's angle?

A. $\frac{1}{3}$ of a circle + $\frac{1}{3}$ of a circle + $\frac{1}{3}$ of a circle

B. $\frac{1}{90}$ of a circle + $\frac{1}{90}$ of a circle + $\frac{1}{90}$ of a circle

C. $\frac{1}{180}$ of a circle + $\frac{1}{180}$ of a circle + $\frac{1}{180}$ of a circle

D. $\frac{1}{360}$ of a circle + $\frac{1}{360}$ of a circle + $\frac{1}{360}$ of a circle

Measurement and Data
4.MD.C.05c
Items 248 – 249

ITEM 248

Which statement about angles is true?

A. An angle is formed by two rays that do not have the same endpoint.

B. An angle that turns through $\frac{1}{270}$ of a circle has a measure of 13 degrees.

C. An angle that turns through thirteen 1-degree angles has a measure of 13 degrees.

D. An angle measure is equal to the total length of the two rays that form the angle.

ITEM 249

Frank turns his steering wheel a full circle of 360°. Which statement best represents the movement of the steering wheel?

A. The wheel makes 260 one-degree turns.

B. The wheel makes 360 ten-degree turns.

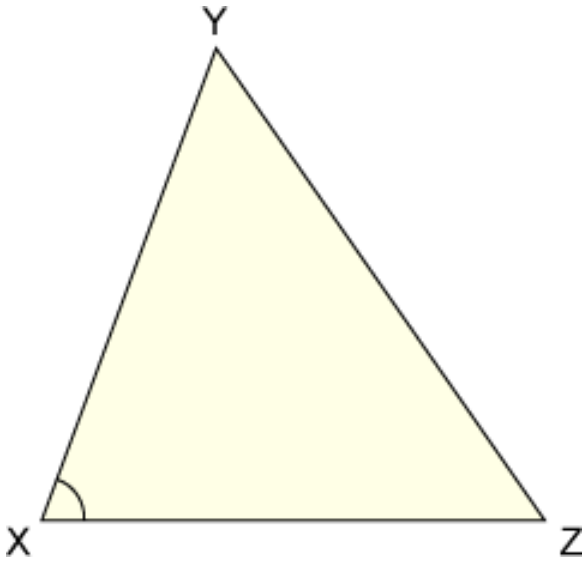
C. The wheel makes 360 one-degree turns.

D. The wheel makes 360 one hundred-degree turns.

Measurement and Data
4.MD.C.06
Items 250 – 256

ITEM 250

Angle X is labeled in the triangle. Use your protractor to measure angle X.



What is the measure of angle X to the nearest degree?

A. 65°

B. 70°

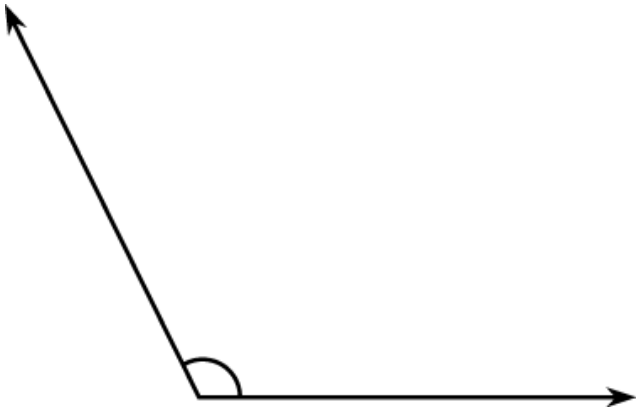
C. 75°

D. 110°

ITEM 251

Use your protractor to answer this question.

What is the measure of this angle?



A. 26°

B. 64°

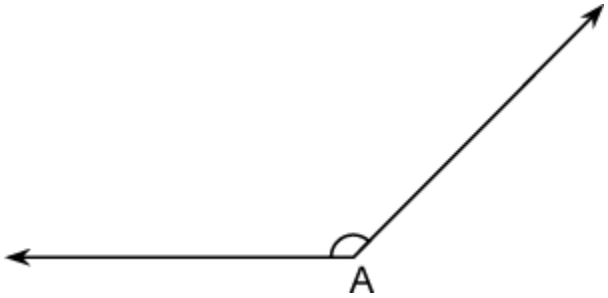
C. 116°

D. 124°

ITEM 252

Use the protractor to answer this question.

What is the measure of angle A?



A. 125°

B. 130°

C. 135°

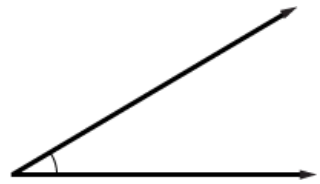
D. 140°

ITEM 253

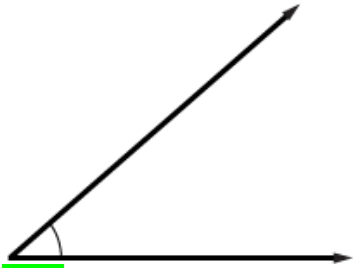
Use the protractor to answer this question.

Kaylee drew a 40° angle. Which angle is the one Kaylee drew?

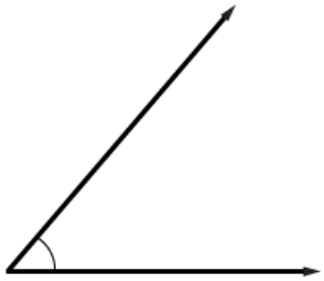
A.



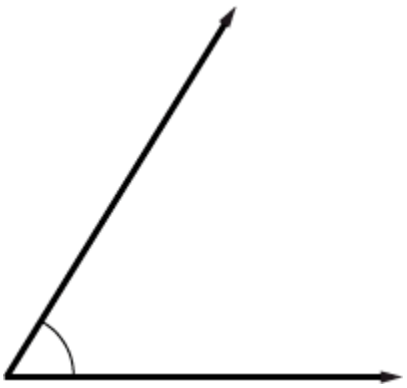
B.



C.

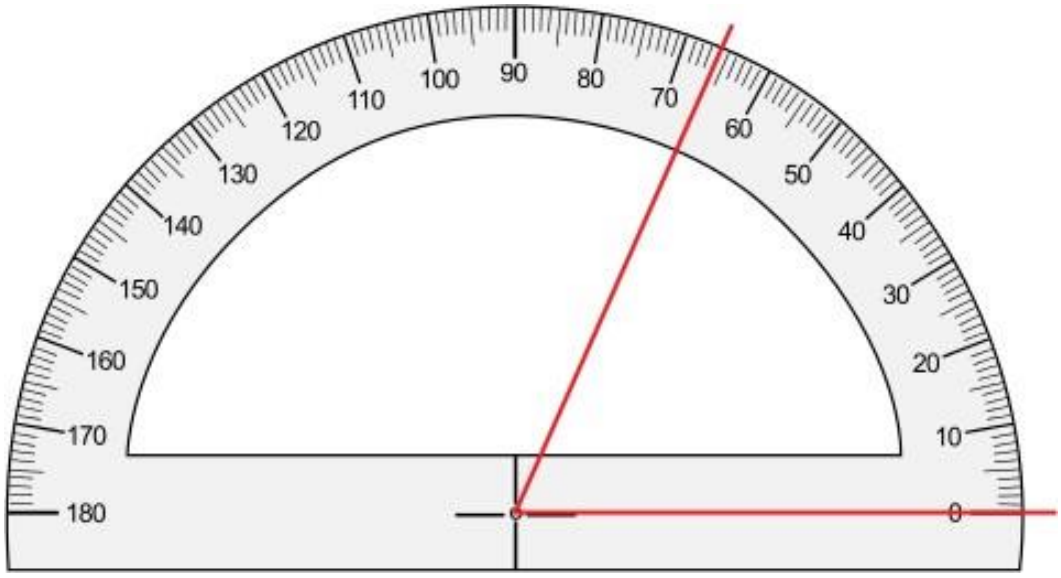


D.



ITEM 254

Use this protractor to answer the question.



What is the measure of the angle shown in red?

A. 65°

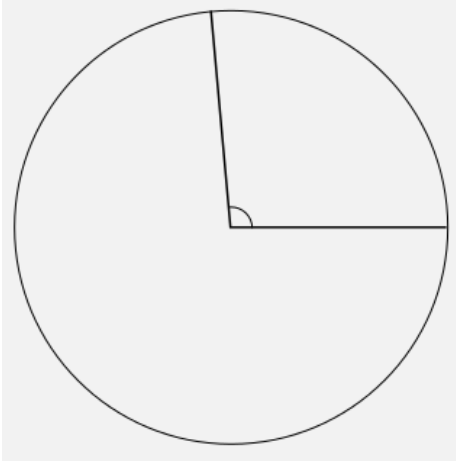
B. 66°

C. 70°

D. 74°

ITEM 255

Use the protractor and the picture to answer the question.



What is the measure of this angle?

A. 85°

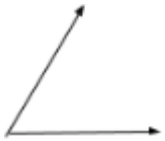
B. 90°

C. 95°

D. 105°

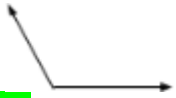
ITEM 256

Which angle has a measure of 120°?

A. 

B. 

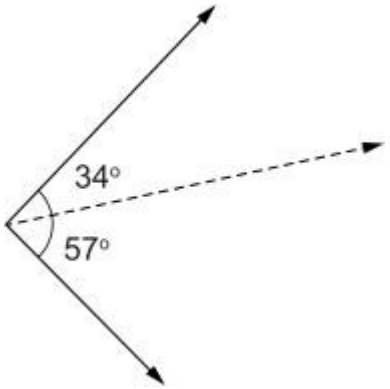
C. 

D. 

Measurement and Data
4.MD.C.07
Items 257 – 261

ITEM 257

Use the picture to answer the question.



A security camera in a store rotates 34° and then pauses. It then rotates another 57°. How many total degrees does the camera rotate?

A. 23°

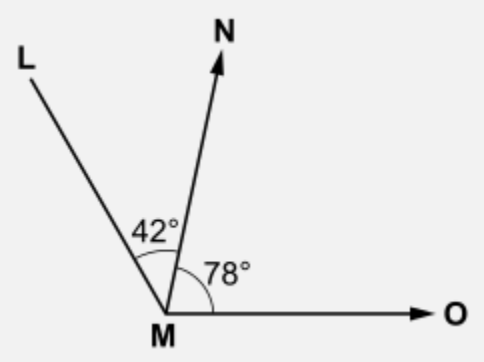
B. 57°

C. 81°

D. 91°

ITEM 258

What is the measure of angle LMO?



A. 35°

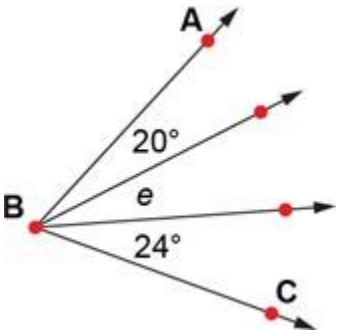
B. 36°

C. 110°

D. 120°

ITEM 259

The measure of angle ABC is 67°. What is the measure of angle e?



A. 13°

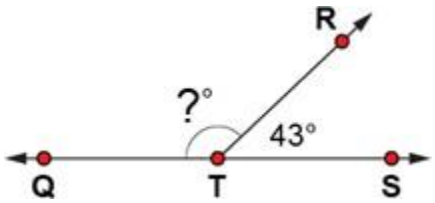
B. 23°

C. 44°

D. 111°

ITEM 260

Angle QTS measures 180°. What is the measure of angle QTR?



A. 47°

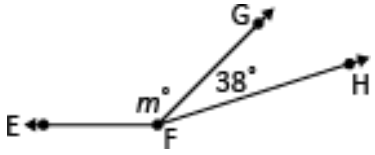
B. 133°

C. 137°

D. 180°

ITEM 261

The measure of angle EFH is 158°. Which equation could be used to find the measure of angle EFG?



A. $38 + m = 158$

B. $m - 38 = 158$

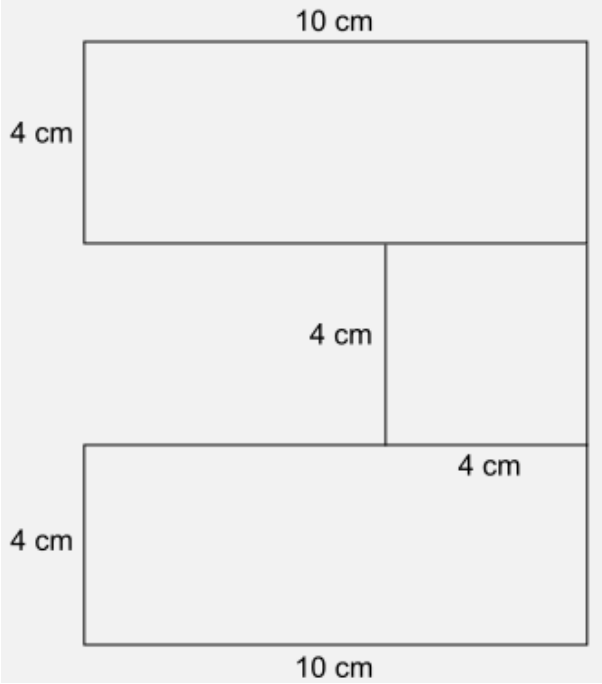
C. $m \times 38 = 158$

D. $158 \div 38 = m$

Measurement & Data
4.MD.D.08
Items 262 – 267

ITEM 262

The figure shows the floor plan for a new kitchen.



What is the total area, in square centimeters, of the floor of the kitchen?

A. 40

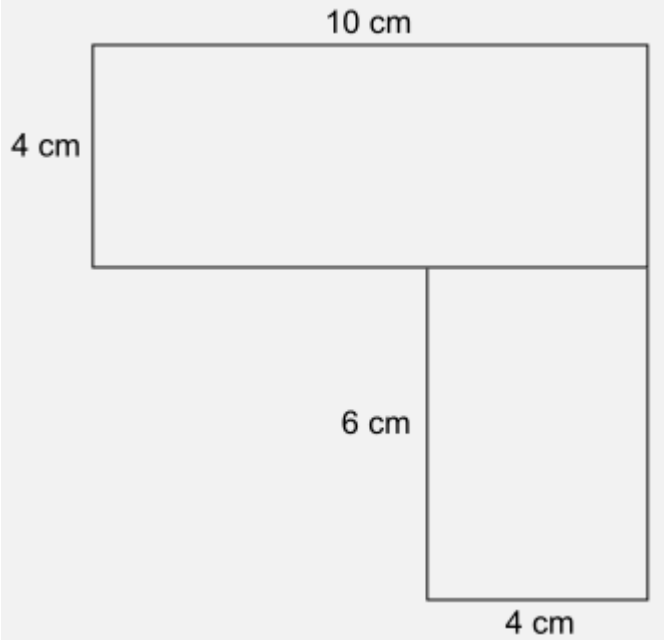
B. 56

C. 80

D. 96

ITEM 263

Find the area of the figure below.



A. 34 cm^2

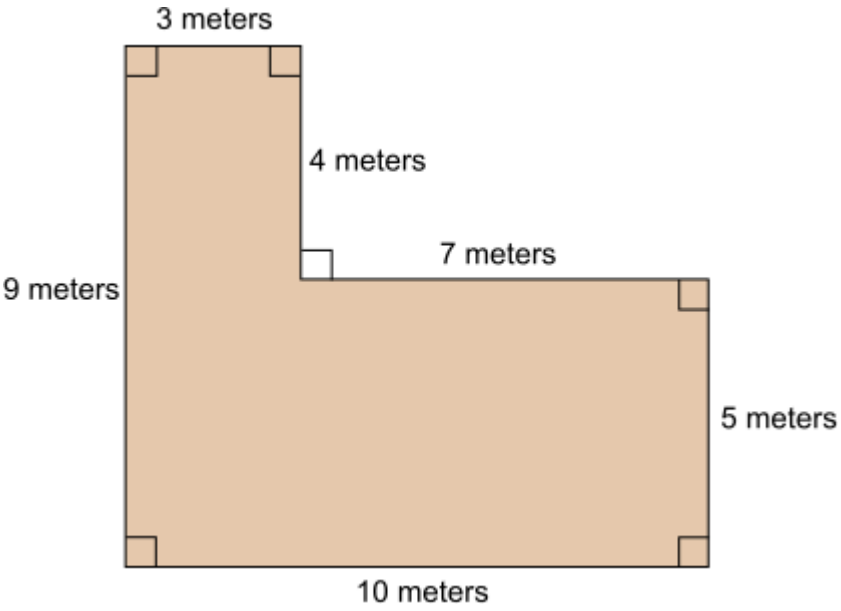
B. 40 cm^2

C. 64 cm^2

D. 80 cm^2

ITEM 264

Use the diagram to answer the question.



The diagram shows Jessie's backyard. What is the area of Jessie's backyard?

A. 38 square meters

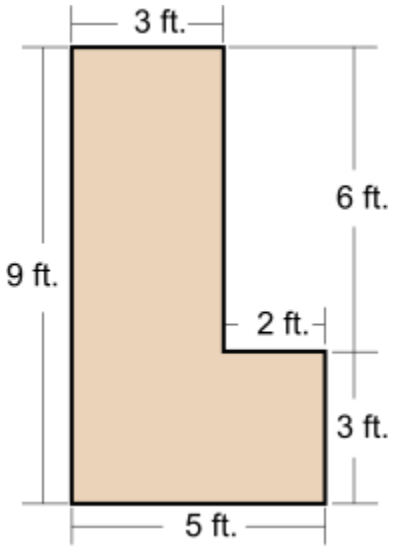
B. 62 square meters

C. 77 square meters

D. 90 square meters

ITEM 265

Bluebonnet Park built a new sandbox next to the slides. The sandbox is shown by the figure below:



What is the area of Bluebonnet Park's new sandbox?

A. 28 square feet

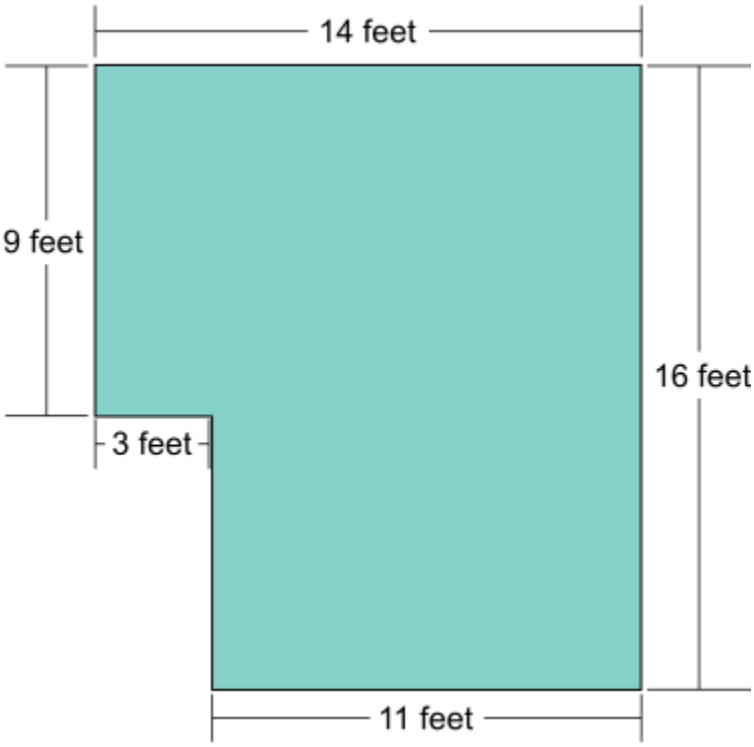
B. 33 square feet

C. 42 square feet

D. 45 square feet

ITEM 266

Mr. Chan is replacing the floor in his kitchen. The shape of the kitchen floor is represented in the drawing.



What is the area of the floor that Mr. Chan is replacing?

A. 126 square feet

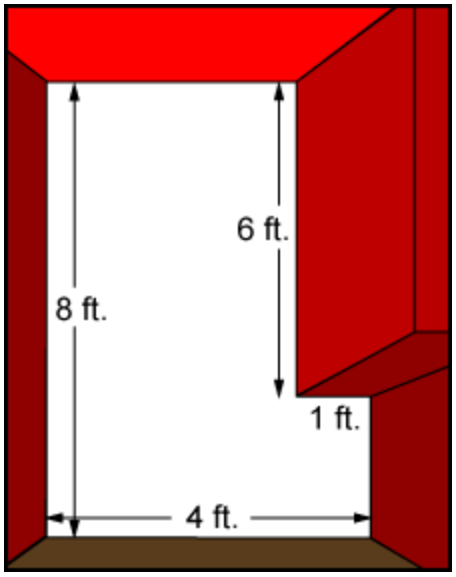
B. 176 square feet

C. 203 square feet

D. 224 square feet

ITEM 267

The picture below is a scaled down version of a wall in Stephen's bedroom.



Stephen needs to know the area of the unpainted white wall so he can buy enough paint to cover it. All angles in the white wall are right angles. What is the area of the unpainted wall?

A. 24 square feet

B. 26 square feet

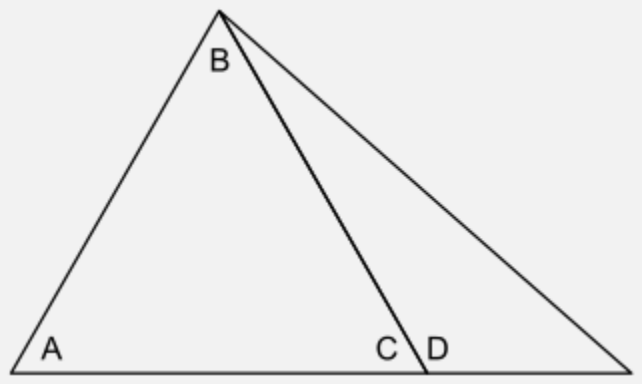
C. 32 square feet

D. 48 square feet

Geometry
4.G.A.01
Items 268 – 287

ITEM 268

Look at the figure.



Which angle is not acute?

A. angle A

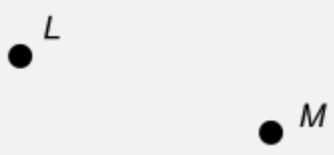
B. angle B

C. angle C

D. angle D

ITEM 269

Develin connects points L and M without going past either point.



Which geometric figure did Develin draw?

A. line

B. line segment

C. point

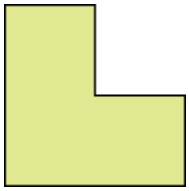
D. ray

ITEM 270

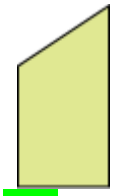
Which figure contains exactly 2 right angles and exactly 1 pair of parallel sides?

A.

B.



C.

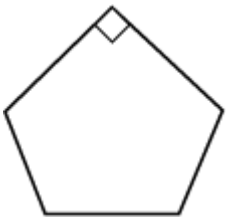


D.

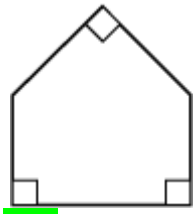
ITEM 271

Which of the following figures has all of these properties?

- 5 sides
- Exactly 1 pair of parallel sides
- Exactly 3 right angles



A.



B.

C.

D.

ITEM 272

Use the trapezoid below to answer the question.

How many **pairs** of parallel lines does this trapezoid have?

A. one

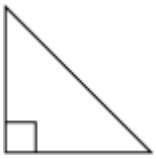
B. two

C. three

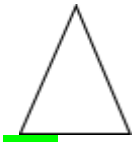
D. four

ITEM 273

Which shape has only acute angles?



A.



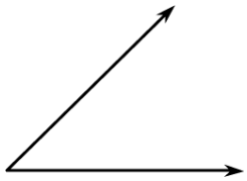
B.

C.

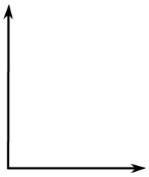
D.

ITEM 274

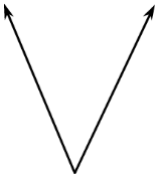
Which angle is obtuse?



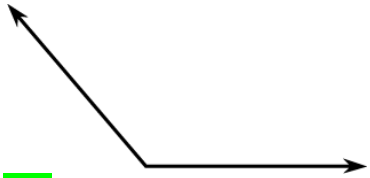
A.



B.



C.



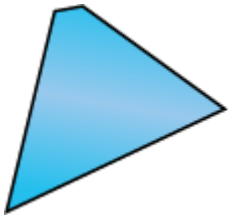
D.

ITEM 275

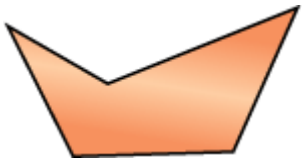
Which polygon has 3 acute angles?

A.

B.



C.



D.

ITEM 276

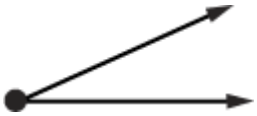
Which of the following is a single ray?

A.

B.

C.

D.



ITEM 277

What is the name of this figure?

A. angle

B. line segment

C. plane

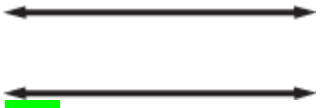
D. ray

ITEM 278

Which pair of lines appear to be parallel?

A.

B.



C.

D.

ITEM 279

Which figure does not have an obtuse angle?

A.

B.

C.

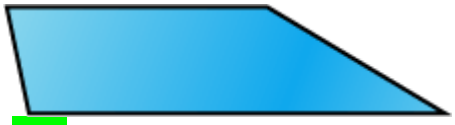
D.

ITEM 280

Which shape has exactly one pair of parallel sides?

A.

B.

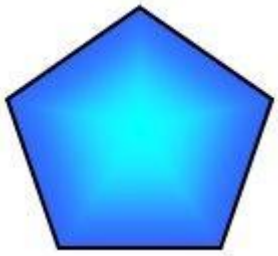


C.

D.

ITEM 281

Which shape has exactly one pair of perpendicular sides?



A.

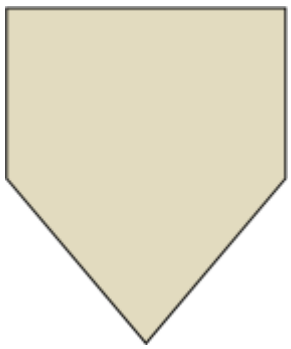
B.

C.

D.

ITEM 282

How many acute angles are in the shape below?



A. 1

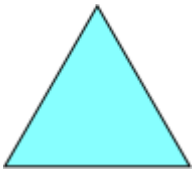
B. 2

C. 3

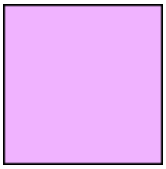
D. 5

ITEM 283

Which shape has the greatest number of obtuse angles?

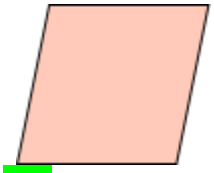


A.



B.

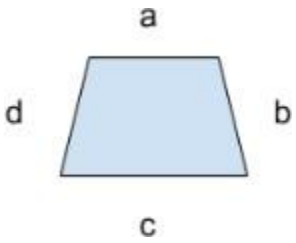
C.



D.

ITEM 284

A quadrilateral shape is shown.



Which statement is true about side c?

A. Side a is parallel to side c.

B. Side b is parallel to side c.

C. Side d is parallel to side c.

D. None of the sides are parallel to side c.

ITEM 285

What kind of angle is shown below?

A. an acute angle

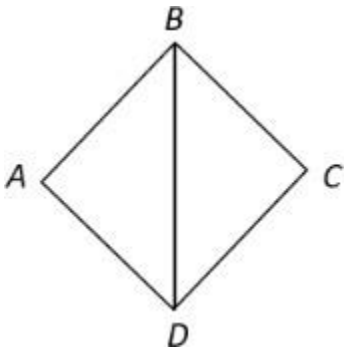
B. an obtuse angle

C. a right angle

D. a straight angle

ITEM 286

Which two line segments appear to be parallel?



A. $\overline{AB}$ and $\overline{AD}$

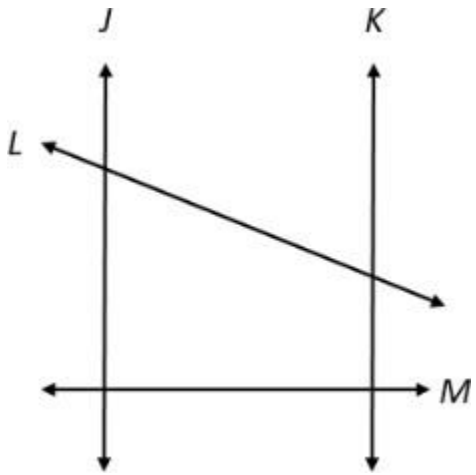
B. $\overline{BC}$ and $\overline{AD}$

C. $\overline{BC}$ and $\overline{BD}$

D. $\overline{CD}$ and $\overline{AD}$

ITEM 287

Which two lines appear to be perpendicular?



A. Lines J and K

B. Lines J and M

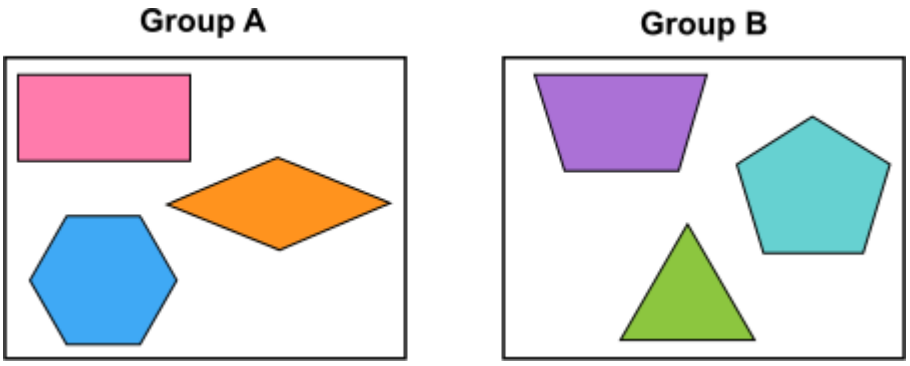
C. Lines J and L

D. Lines L and M

Geometry
4.G.A.02
Items 288 – 292

ITEM 288

A set of shapes have been classified into these two groups.



Which of the following statements is true?

A. All of the figures in Group A have at least two pairs of parallel lines.

B. All of the figures in Group B have only acute and right angles no obtuse angles.

C. All of the figures in Group A have only obtuse and right angles no acute angles.

D. All of the figures in Group B have at least one pair of perpendicular lines.

ITEM 289

Which quadrilateral must always have 2 pairs of parallel sides and 4 right angles?

A. parallelogram

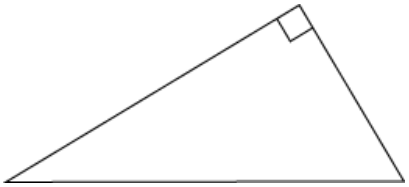
B. rectangle

C. rhombus

D. trapezoid

ITEM 290

Which statement best explains why the triangle below is classified as a right triangle?



A. It has one angle that measures 90°.

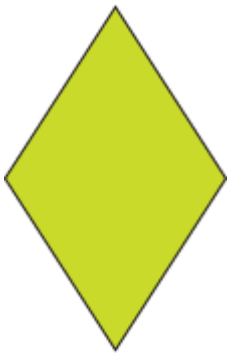
B. It has one angle that measures less than 90°.

C. It has one angle that measures greater than 90°.

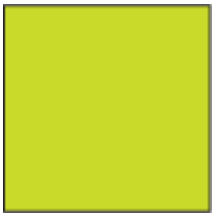
D. It has two angles that measure less than 90°.

ITEM 291

Which shape is not a parallelogram?



A.



B.

C.

D.

ITEM 292

The following shapes have been sorted into the same group.

Which attribute could have been used to group these shapes together?

A. These figures each have at least two obtuse angles.

B. These figures all have one right angle.

C. These figures only have parallel lines.

D. These figures have at least two acute angles.

Geometry
4.G.A.03
Items 293 – 297

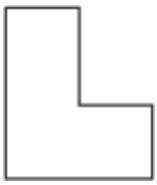
ITEM 293

Which shape has more than 2 lines of symmetry?

A.

B.

C.

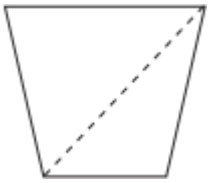


D.

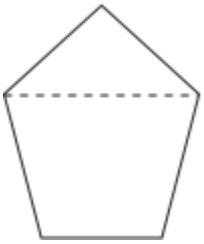
ITEM 294

Which shape is divided by a line of symmetry?

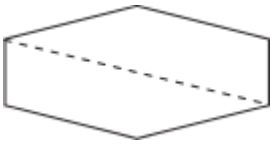
A.



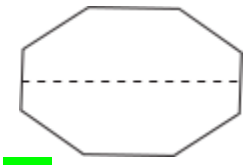
B.



C.



D.

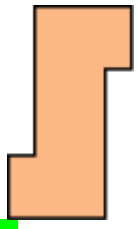


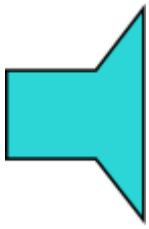
ITEM 295

Which figure has no lines of symmetry?

A. 

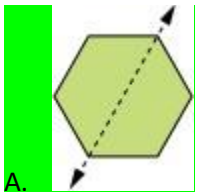
B. 

C. 

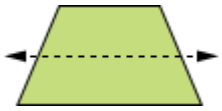
D. 

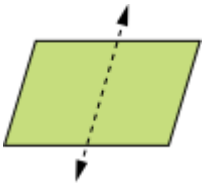
ITEM 296

Which figure has a line of symmetry?

A. 

B. 

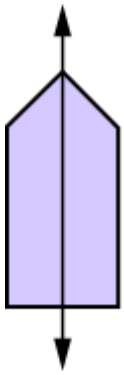
C. 

D. 

ITEM 297

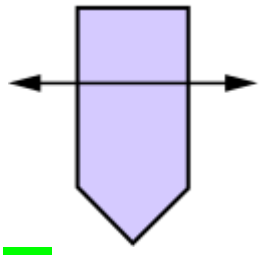
Which one of the following choices does **not** show a line of symmetry on the figure?

A.



B.

C.



D.