LEAP CONNECT

Directions for Practice Test Administration

Mathematics

Grade 7

DEPARTMENT of EDUCATION

Louisiana Believes

(page is intentionally blank)

Table of Contents

Purpose

The *Directions for Practice Test Administration* (DPTA) provides the Test Administrator (TA) of the LEAP Connect practice test with specific instructions for administration of this particular practice test. Each DPTA provides the exact wording of the items to be used by the TA, the materials needed in preparation of the practice test, and guidelines for how to present the items to the student.

Materials

Materials needed for the LEAP Connect Practice Test Administration:

1. *Directions for Practice Test Administration* (DPTA)
2. *Procedures for Assessing Students Who Are Visually Impaired, Deaf, or Deaf-Blind*
3. *Grade 7 Mathematics Practice Test Reference Materials*

Directions

1. **Know and follow all directions for test administration** provided in the DPTA and *Procedures for Assessing Students Who Are Visually Impaired, Deaf, or Deaf-Blind*.
2. Be familiar with and utilize the Text to Speech (TTS) as appropriate. The DRC INSIGHT Assessment System includes TTS that will read aloud the text of directions, items, and answer options and will also read aloud standardized descriptive statements for tables, charts, graphs, and timelines.
    a. This text is read to all students using a consistent rate of reading and tone of voice. If a student wishes to have any or all of the text repeated, click on the Starting Points button (the circle between the Stop and Play/Pause buttons). Then use the mouse to select the starting point (blue circle) just before the text that needs to be repeated.
    b. To change the volume or speed of the TTS or turn off the follow-along, select the Options button at the bottom of the screen, then select Audio Settings and adjust as desired.
    c. If the TTS will not be used, the TA can turn off the volume and the follow-along using the Audio Settings. The TA must read the directions, items, answer option text, and graphic descriptions **exactly as written** using a consistent rate of reading and tone of voice.
3. Be familiar with and utilize the Alternative Text as appropriate. Alternative Text is bracketed and written in italics. Alternative Text is included for students who are blind or have a visual impairment and require graphics to be described. This Alternative Text includes descriptive statements for tables, charts, graphs, and any graphics necessary for appropriate interaction with the items to be described.

Guidance on Printed Materials

Mathematics Practice Test Reference Materials include required graphics and the answer options for each practice test item. The DPTA will prompt the TA when the required graphics are to be presented to the student. The answer options are included so they can be copied and used as needed (e.g., eye-gaze boards).

Selected-Response Items

Selected-response items are presented to students in the following order:

- Item stimulus (which may include an example, picture, graphic, equation, formula, or other illustration)
- Item question
- Answer options (which are indicated by radio buttons and presented vertically)

Students independently select a response from the options. Being mindful that students will respond in a variety of ways (e.g., with words, gestures, eye gaze, communication devices, assistive technology, etc.), TAs can enter responses on behalf of the student. Ensure that Augmentative and Alternative Communication (AAC) and Assistive Technology (AT) used routinely for instruction are available to support the student in communicating responses. Each item will indicate the use of a calculator in the DPTA and DRC INSIGHT. Students with a calculator accommodation may use a calculator for all practice test questions.

Mathematics Selected-Response Item Example

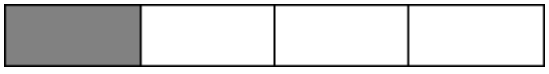
The LEAP Connect practice test items reflect grade-level content presented at varying degrees of complexity. The following item example illustrates a selected-response item and components which support the ways that students with a wide range of learner characteristics are presented with practice test items. The following item example does not reflect ALL content that is assessed in each grade-level content area and does not represent every degree of complexity.

Mathematics Item Example

This item is about fractions. ← TTS or TA reads item directions.

This fraction bar is divided into 4 equal parts.

Point to each part. ← Directions for TA to point to aspects of item on the computer screen or in the *Reference Materials* (RM).



There is 1 part that is shaded. ← TTS or TA reads item text.

Point to the shaded part.

Directions for TA to point to shaded part on screen or in RM.

This fraction shows that 1 of the 4 parts is shaded.

Point to the fraction.

Directions for TA to point to the fraction on screen or in RM.

$$\frac{11}{44}$$

This fraction bar is divided into equal parts.

There is 1 part shaded.

Point to the shaded part.

What part of the fraction is shaded?

TTS or TA reads question text.

Point to each option as the TTS or TA reads each option.

Directions for TA to point to each answer option as the TTS or TA reads each option on screen or in RM.

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

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

TTS or TA reads answer choices.

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

Procedures for Constructed-Response (CR) Tasks

The CR tasks require students to construct an answer rather than select an answer from multiple-choice options. The TA must enter the student CR score into DRC INSIGHT. The CR task is presented to the student in a standardized, scripted sequence of steps, culminating in a TA's scoring of the student performance according to the Mathematics Scoring Rubric. The Mathematics Scoring Rubrics are included with the appropriate CR tasks in the DPTA and provide scoring standards that must be used to evaluate student responses.

Administering the CR Tasks

- Become familiar with the CR tasks and setup requirements.
- Rehearse administering each task before administering it to a student by reading the script for each task.
- Become familiar with the scoring rubric and directions for scoring the student response.
- Prepare the test setting:
    - Assemble any needed materials (pencils, markers, etc.).
    - Provide any allowable manipulatives (e.g., counters).
    - Have a calculator available.
    - Provide materials required for student accommodations.
    - Position the student so that they will have the optimal vantage to view and manipulate materials in order to facilitate sustained attention.
    - Eliminate noise and visual distractions that may divert the student's attention.
    - Collect all printed materials that the student will need.
    - Enlarge any stimulus materials, using the enlarge feature on a printer or copier, if needed.
    - Locate the appropriate stimulus material, which is identified by name on the front of each for ease of handling before, during, and after test administration. Cut the stimulus materials apart (if applicable).

Scoring the Mathematics CR Tasks

In order to have consistent and reliable CR scoring, TAs must understand and apply the Mathematics Scoring Rubrics in the same way to every student's response.

Independently score a student's performance on the CR tasks. Being mindful that students will respond in a variety of ways (e.g., with words, gestures, eye gaze, communication devices, assistive technology, etc.), careful and meticulous observation will enable the TA to accurately assign the appropriate score point based on the Mathematics Scoring Rubrics in the DPTA.

Procedures for Entering the Student Score for CR Tasks

Record the student score in the DRC INSIGHT Assessment System. Answer options will be: "The student provided the correct answer." or "The student did not provide the correct answer." After recording the student score, continue to the next item.

Session 1

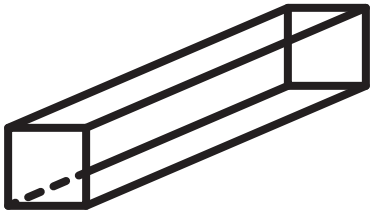
Calculator may be used on this item.

Item 1

This item is about a rectangular prism.

This is a picture of a rectangular prism.

Point to the picture of the rectangular prism.



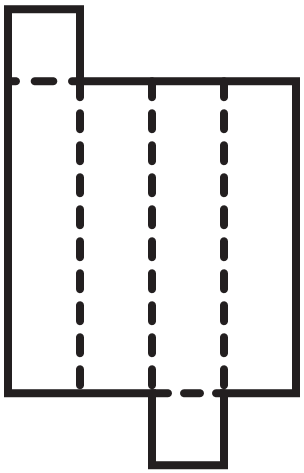
Each surface of the rectangular prism is called a face.

Point to one face on the rectangular prism.

A net is what a three-dimensional figure would look like if you unfolded it and laid it flat.

This is the net of a rectangular prism.

Point to the net of the rectangular prism.



This net shows each face of the rectangular prism.

Item 1, continued

The surface area is the areas of all the faces of the rectangular prism added together.

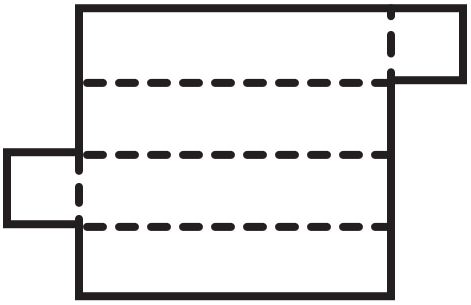
Motion with one finger over the whole net.

Which picture shows the surface area of the rectangular prism?

Point to the picture of the rectangular prism.

Point to each option.

A. 

B. 

Calculator may be used on this item.

Provide student with Data Table 1, "Pelicans Seen in One Hour" from the Grade 7 Mathematics Practice Test Reference Materials.

Item 2

This item is about a data table.

Two students recorded how many pelicans they saw in 1 hour. In this data table, they used a tally mark to record each pelican seen.

Point to the data table as the TTS or TA reads the graphic description.

[Graphic description: "This is a data table titled 'Pelicans Seen in One Hour.' It shows the number of pelicans seen by Tracy and Steve in one hour, represented by tally marks. Tracy has six tally marks, and Steve has three tally marks."]

Pelicans Seen in One Hour

Tracy	Steve
	

Which student saw more pelicans in 1 hour?

Point to each option the TTS or TA reads each option.

A. Tracy

B. Steve

Calculator may be used on this item.

Provide student with Bar Graph 1, "Objects Counted" from the Grade 7 Mathematics Practice Test Reference Materials.

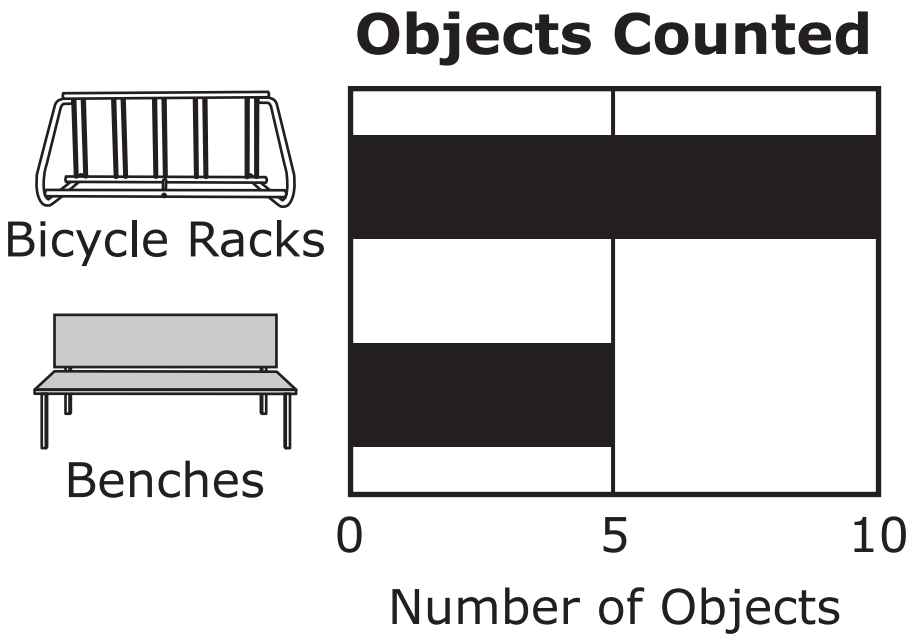
Item 3

This item is about a bar graph.

This bar graph shows the numbers of bicycle racks and benches that a student counted at a park.

Point to the bar graph and the objects as the TTS or TA reads the graphic description.

[Graphic description: "This is a bar graph titled, 'Objects Counted.' It shows the number of bicycle racks and benches counted at a park. Ten bicycle racks and five benches were counted at the park."]



This bar shows how many bicycle racks the student counted.

Point to the bar labeled "Bicycle Racks."

This bar shows how many benches the student counted.

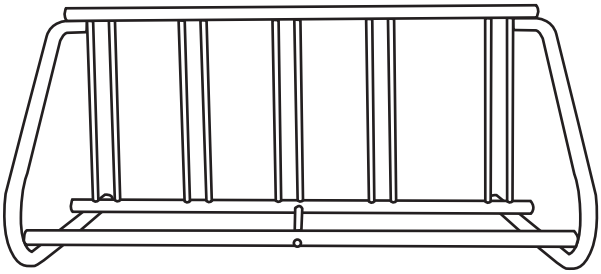
Point to the bar labeled "Benches."

Item 3, continued

Did the student count more bicycle racks or benches?

Point to the location of each option on the bar graph as the TTS or TA reads each graphic description.

[Graphic description: "A. Bicycle Racks"]



A. Bicycle Racks

[Graphic description: "B. Benches"]

B. Benches

Calculator may be used on this item.

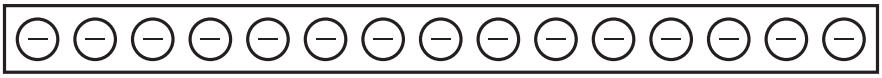
Item 4

This item is about division.

This picture is a model of *[Graphic description: "negative fifteen"]* -15.

Point to the model of -15.

[For students with visual impairment, read "This model shows one set of fifteen circles."]



Each circle is *[Graphic description: "negative one"]* -1.

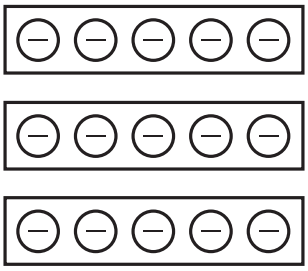
Point to and count, by negative ones, each circle in the model of -15.

This model shows *[Graphic description: "negative fifteen"]* -15.

This picture is another model. This model shows *[Graphic description: "negative fifteen divided by five"]* $(-15) \div 5$.

Point to the model of negative fifteen divided by five.

[For students with visual impairment, read "This model shows three sets of five circles. Each circle is a negative one."]

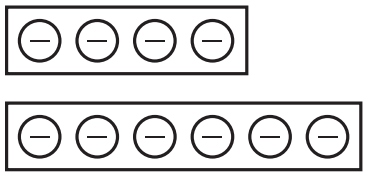


Which picture shows a model of *[Graphic description: "negative ten divided by five"]* $(-10) \div 5$?

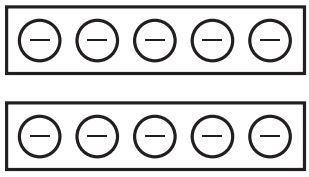
Point to each option as the TTS or TA reads each option.

Item 4, continued

For students with visual impairment, read "A. This is a picture of two sets of circles. The first set has four circles. The second set has six circles. Each circle is a negative one."]

A. 

[For students with visual impairment, read "B. This is a picture of two sets of five circles. Each set has five circles. Each circle is a negative one."]

B. 

Calculator may be used on this item.

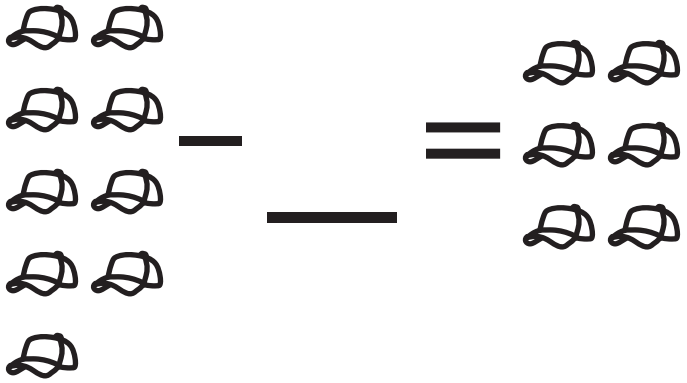
Item 5

This item is about solving a word problem.

Alan had 9 hats. He gave some away. Now he has 6 hats left.

Point to the picture as the TTS or TA reads the graphic description.

[Graphic description: “Nine hats minus blank equals six hats.”]



This equation can be used to find out how many hats Alan gave away.

Point to the equation as the TTS or TA reads the graphic description.

[Graphic description: “Nine minus h equals six.”]

$$9 - \mathbf{h} = 6$$

A letter can stand for an unknown number. The letter **h** in this equation stands for the number of hats Alan gave away.

*Point to the letter **h** in the equation.*

Item 5, continued

How many hats did Alan give away?

Point to each option as the TTS or TA reads each option.

A. 3 hats

B. 4 hats

C. 15 hats

Calculator may be used on this item.

Provide student with Data Table 2, "Game Card Packs" from the Grade 7 Mathematics Practice Test Reference Materials.

Item 6

This item is about proportional reasoning.

This data table shows the total number of game cards in different numbers of card packs. Each game card pack has the same number of cards.

Point to the data table as the TTS or TA reads the graphic description.

[Graphic description: "This is a data table titled, 'Game Card Packs.' It shows the number of card packs and the number of cards. One card pack has an unknown number of cards. Two card packs have thirty cards. Three card packs have forty-five cards. Four card packs have sixty cards."]

Game Card Packs

Number of Card Packs	Number of Cards
1	?
2	30
3	45
4	60

This equation can be used to find the number of cards **(c)** in the number of packs **(p)**.

Point to the equation as the TTS or TA reads the graphic description.

[Graphic description: "c equals p times 15."]

$$c = p \times 15$$

Item 6, continued

How many cards are in 1 game card pack?

Point to each option as the TTS or TA reads each option.

A. 15 cards

B. 30 cards

C. 45 cards

Calculator may be used on this item.

Provide student with Formula 1 showing the area of a circle from the Grade 7 Mathematics Practice Test Reference Materials.

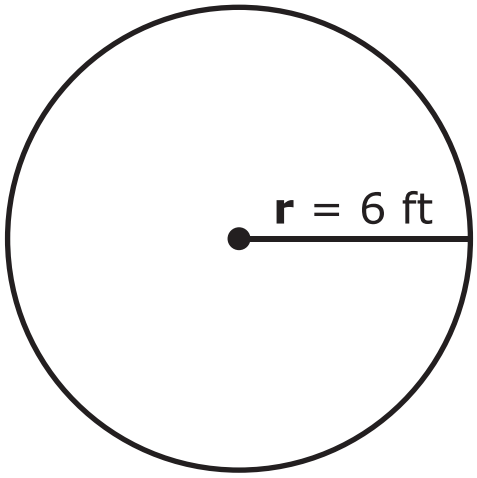
Item 7

This item is about finding the area of a circle.

You will use a formula to find the area of this circle.

Point to the circle and formula as the TTS or TA reads the graphic description.

[Graphic description: "This is a circle showing a radius of 6 feet. Underneath the circle is the formula that reads Area equals three and fourteen hundredths times r times r."]



$$\text{Area} = 3.14 \times \mathbf{r} \times \mathbf{r}$$

The radius, **r**, of this circle is 6 feet.

Point to the radius of the circle.

Item 7, continued

You will use this formula to find the area of the circle.

Point to the Formula as the TTS or TA reads the graphic description.

[Graphic description: "Area equals three and fourteen hundredths times r times r. Area equals three and fourteen hundredths times blank times blank."]

$$\text{Area} = 3.14 \times \mathbf{r} \times \mathbf{r}$$

$$\text{Area} = 3.14 \times \_ \times \_$$

What is the area of this circle?

Point to the circle.

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: "A. fifteen and fourteen hundredths square feet"]

A. 15.14 sq ft

[Graphic description: "B. thirty-nine and fourteen hundredths square feet"]

B. 39.14 sq ft

[Graphic description: "C. one hundred thirteen and four hundredths square feet"]

C. 113.04 sq ft

Calculator may be used on this item.

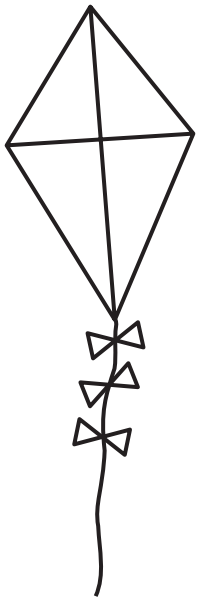
Item 8

This item is about solving a word problem using a ratio.

A ratio is a comparison between two quantities.

Brady ties 3 ribbons to each kite he builds.

Point to the picture.



This is a ratio of 3 ribbons to 1 kite.

Point to the ratio as the TTS or TA reads the ratio.

3 to 1

How many ribbons are needed for 5 kites?

Point to each option as the TTS or TA reads each option.

A. 8 ribbons

B. 9 ribbons

C. 15 ribbons

Calculator may be used on this item.

Provide student with Bar Graph 2, "Favorite Sport to Watch" from the Grade 7 Mathematics Practice Test Reference Materials.

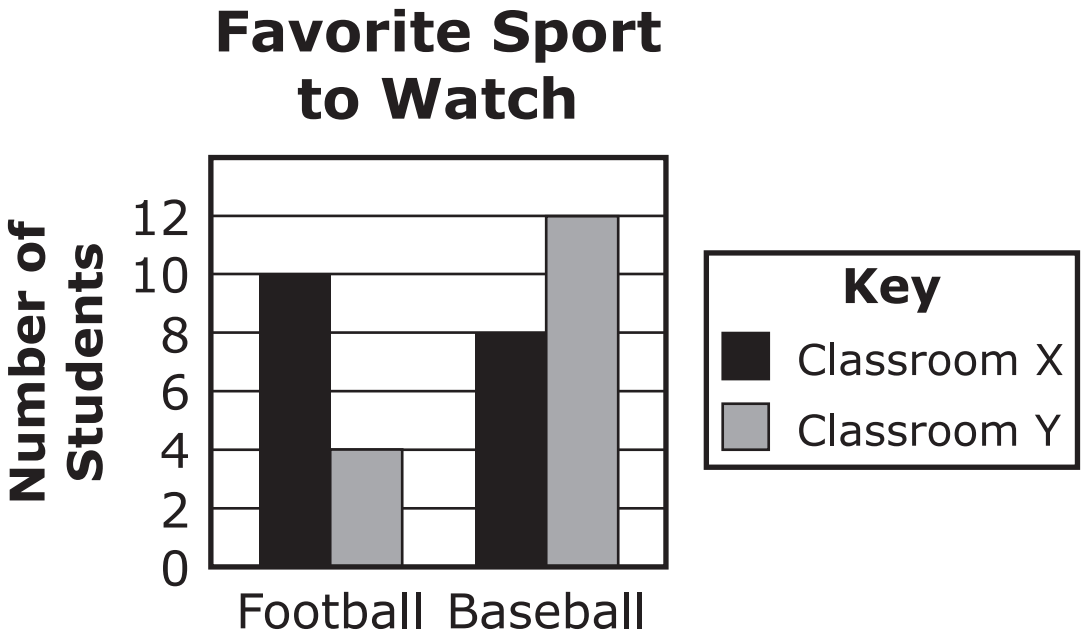
Item 9

This item is about a bar graph.

This bar graph shows 2 types of sports that students in Classrooms X and Y like to watch most.

Point to the bar graph as the TTS or TA reads the graphic description.

[Graphic description: "This is a bar graph titled, 'Favorite Sport to Watch.' It shows two types of sports. The bars show the number of students who like to watch each sport the most from each classroom. Ten students in Classroom X's favorite sport to watch is football. Four students in Classroom Y's favorite sport to watch is football. Eight students in Classroom X's favorite sport to watch is baseball. Twelve students in Classroom Y's favorite sport to watch is baseball."]



The kinds of sports are shown on the x-axis.

Point to the x-axis as the TTS or TA reads the labels, "Football" and "Baseball."

Item 9, continued

The key shows which bars are for Classroom X and which bars are for Classroom Y.

Point to the bars in the bar graph for Classroom X as the TTS or TA reads the key label "Classroom X." Point to the bars for Classroom Y as the TTS or TA reads the key label "Classroom Y."

These are the numbers of students in Classroom X and Classroom Y who like to watch each sport.

Point to the numbers along the y-axis.

Which sentence correctly compares the number of students in Classroom X and the number of students in Classroom Y who like watching football the most?

Point to each option as the TTS or TA reads each option.

A. **More** students in Classroom X than in Classroom Y like watching football.

B. **Less** students in Classroom X than in Classroom Y like watching football.

C. About the **same** number of students in Classroom X and Classroom Y like watching football.

Calculator may be used on this item.

Item 10

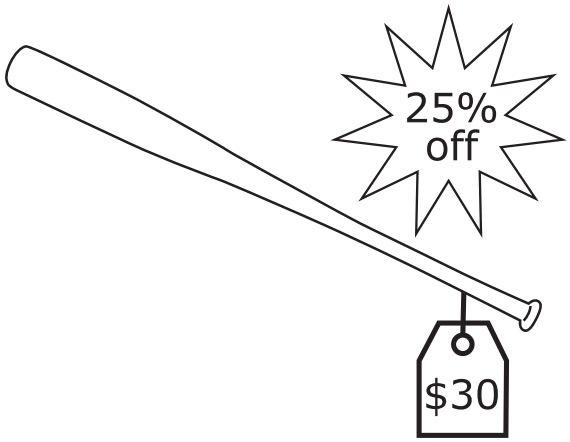
This item is about how to use a proportion to solve a word problem.

A proportion is two ratios that are equal.

This is a word problem.

Jami is buying a new baseball bat. The baseball bat is normally priced at $30. Now it is on sale for 25% off.

Point to the picture.



To find out how much the discount on the bat is, first set up a proportional relationship like this one.

Point to the proportion as the TTS or TA reads the graphic description.

[Graphic description: "discount divided by normal price equals percent off divided by one hundred."]

$$\frac{\text{discount}}{\text{normal price}} = \frac{\text{percent off}}{100}$$

Item 10, continued

This proportion can be used to find the discount.

Point to the proportion as the TTS or TA reads the graphic description.

[Graphic description: "d divided by thirty equals twenty-five divided by one hundred."]

$$\frac{\mathbf{d}}{30} = \frac{25}{100}$$

The letter **d** stands for the discount.

*Point to the variable, **d**, in the proportion.*

The fraction *[Graphic description: "twenty-five divided by one hundred"]* $\frac{\mathbf{25}}{\mathbf{100}}$ equals *[Graphic description: "twenty-five percent"]* **25%**.

Point to 25/100 in the proportion.

This is another word problem.

Jami is buying a new baseball glove. The baseball glove is normally priced at $54. Now it is on sale for 10% off.

Point to the picture.

Item 10, continued

Let the letter **d** stand for the discount.

Which proportion can be used to find out how much the discount for the baseball glove is?

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: "A. d divided by one hundred equals ten divided by d."]

A. $\frac{\mathbf{d}}{100} = \frac{10}{\mathbf{d}}$

[Graphic description: "B. fifty-four divided by one hundred equals d divided by one hundred."]

B. $\frac{54}{100} = \frac{\mathbf{d}}{100}$

[Graphic description: "C. d divided by fifty-four equals ten divided by one hundred."]

C. $\frac{\mathbf{d}}{54} = \frac{10}{100}$

Calculator may be used on this item.

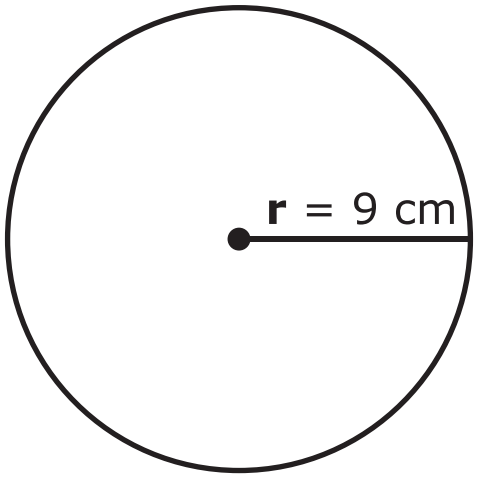
Item 11

This item is about finding the area of a circle.

This is a circle.

Point to the circle as the TTS or TA reads the graphic description.

[Graphic description: "This is a picture of a circle. There is a line showing the radius and it is labeled r equals nine centimeters."]



This is the formula for finding the area of a circle.

Point to the formula as the TTS or TA reads the graphic description.

[Graphic description: "Area equals three and fourteen hundredths times r times r."]

$$\text{Area} = 3.14 \times \mathbf{r} \times \mathbf{r}$$

A letter can stand for a number in an equation.

The letter **r** in this equation stands for the radius. The radius of this circle is 9 centimeters.

Point to the radius and the 9 in the circle.

Item 11, continued

Which equation shows how to find the area of the circle?

Point to the circle.

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: "A. Area equals three and fourteen hundredths plus nine plus nine."]

A. $\text{Area} = 3.14 + 9 + 9$

[Graphic description: "B. Area equals three and fourteen hundredths times nine times nine."]

B. $\text{Area} = 3.14 \times 9 \times 9$

[Graphic description: "C. Area equals three and fourteen hundredths times nine."]

C. $\text{Area} = 3.14 \times 9$

Calculator may be used on this item.

Provide student with Data Table 3, "Necklace Cost" from the Grade 7 Mathematics Practice Test Reference Materials.

Item 12

This item is about proportional relationships.

This data table shows the proportional relationship between the number of bracelets and the total cost in dollars.

Point to the data table as the TTS or TA reads the graphic description.

[Graphic description: "This is a data table titled, 'Bracelet Cost.' It shows the number of bracelets and the cost of bracelets in dollars. One bracelet costs four dollars. Two bracelets cost eight dollars. Three bracelets cost twelve dollars. Four bracelets cost sixteen dollars."]

Bracelet Cost

Number of Bracelets	Cost of Bracelets (in $)
1	4
2	8
3	12
4	16

Each bracelet costs 4 dollars. The proportional relationship is 1 bracelet to 4 dollars.

This is another data table. This data table is incomplete.

Point to the data table as the TTS or TA reads the graphic description.

[Graphic description: "This is a data table titled, 'Necklace Cost.' It shows the number of necklaces and the cost of necklaces in dollars. One necklace costs an unknown number of dollars. Two necklaces cost twelve dollars. Three necklaces cost eighteen dollars. Four necklaces cost twenty-four dollars."]

Item 12, continued

Necklace Cost

Number of Necklaces	Cost of Necklaces (in $)
1	?
2	12
3	18
4	24

What is the cost of 1 necklace?

Point to the data table “Necklace Cost."

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: “A. six dollars”]

A. $6

[Graphic description: “B. eight dollars”]

B. $8

[Graphic description: “C. ten dollars”]

C. $10

Calculator may be used on this item.

Item 13

This item is about multiplication.

When two negative numbers are multiplied together, the answer is a positive number.

> *Point to the equation as the TTS or TA reads the graphic description.*
>
> *[Graphic description: "A negative number times a negative number equals a positive number."]*

$$(-) \times (-) = (+)$$

This is a multiplication problem.

> *Point to the multiplication problem as the TTS or TA reads the graphic description.*
>
> *[Graphic description: "negative four times negative two equals"]*

$$(-4) \times (-2) =$$

Start by multiplying *[Graphic description: "four times two"]* **4 × 2** to solve this problem.

The answer is 8.

Then look again at the multiplication problem. The symbols before the numbers 4 and 2 are negative.

> *Point to the negative symbols in front of the 4 and the 2 in the multiplication problem.*

Item 13, continued

The two negative symbols make the answer positive.

[Graphic description: "negative four times negative two equals positive eight."]

$$(-4) \times (-2) = (+8)$$

This is another multiplication problem.

Point to the multiplication problem as the TTS or TA reads the graphic description.

[Graphic description: "negative three times negative seven equals"]

$$(-3) \times (-7) =$$

What does *[Graphic description: "negative three times negative seven"]* **(–3) × (–7)** equal?

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: "A. negative twenty-one"]

A. -21

[Graphic description: "B. positive ten"]

B. $+10$

[Graphic description: "C. positive twenty-one"]

C. $+21$

Calculator may be used on this item.

Item 14

This item is about solving a word problem using a ratio.

A ratio is a comparison between two quantities.

Ian drove his truck 90 miles in 3 hours. This comparison can be written as a ratio.

Point to the ratio as the TTS or TA reads the graphic description.

[Graphic description: “ninety to three”]

90 : 3

The number of miles Ian drove his truck in 1 hour can be found by dividing both sides of the ratio by 3. This gives the ratio of 30 miles to 1 hour.

Point to the ratio as the TTS or TA reads the graphic description.

[Graphic description: “thirty to one”]

30 : 1

At this rate, Ian drove 30 miles every 1 hour.

This is another ratio problem.

Tucker hiked 12 miles in 4 hours.

This comparison can be written as a ratio.

Point to the ratio as the TTS or TA reads the graphic

description. [Graphic description: “twelve to four”]

12 : 4

Item 14, continued

At this rate, how many miles did Tucker hike in 1 hour?

Point to each option as the TTS or TA reads each option.

A. 9 miles

B. 8 miles

C. 3 miles

Calculator may be used on this item.

Item 15

This item is about using an equation with a variable.

A variable is a letter that is used in place of a number in an equation.

This is a word problem.

Tanisha brought some money to the store. She spent $7 while she was shopping. Tanisha still has $5 left.

Point to the equation as the TTS or TA reads the graphic description.

[Graphic description: “m minus seven equals five.”]

$$m - 7 = 5$$

The letter **m** in this equation stands for the total amount of money Tanisha brought to the store.

*Point to the letter **m** in the equation.*

Solve the equation to find the total amount of money Tanisha brought to the store.

What is the total amount of money Tanisha brought to the store?

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: “A. two dollars”]

A. $2

[Graphic description: “B. twelve dollars”]

B. $12

[Graphic description: “C. thirty five dollars”]

C. $35

Calculator may be used on this item.

Provide student with Rectangular Prism and Net 1 from the Grade 7 Mathematics Practice Test Reference Materials.

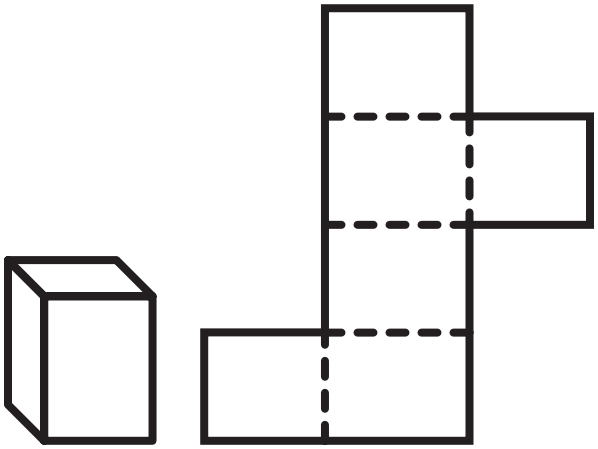
Item 16

This item is about how to use a net to find the surface area of a three-dimensional figure.

A net is what a three-dimensional figure would look like if it was unfolded and laid flat.

This is a picture of a rectangular prism and its net.

Point to the picture of the rectangular prism and its net.



Each rectangle in the net shows a face of the prism. The rectangular prism has 6 faces.

The prism's net can be used to find the surface area of the prism. The surface area is the area of all the faces of the prism added together. This rectangular prism has 6 faces.

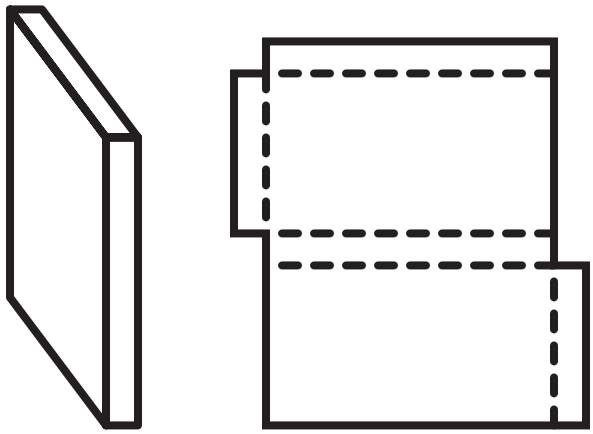
Point to each rectangle in the prism's net.

Item 16, continued

This is another three-dimensional figure and its net.

Point to the picture of the prism and its net.

[For students with visual impairment, read "This is a picture of a rectangular prism and its net."]



How many faces are there on this three-dimensional figure?

Point to the picture of the rectangular prism.

Point to each option as the TTS or TA reads each option.

A. 1

B. 3

C. 6

Calculator may be used on this item.

Item 17

This item is about multiplication.

When a negative number and a positive number are multiplied together, the answer is a negative number.

> *Point to the equations as the TTS or TA reads the graphic description.*
>
> *[Graphic description: "A positive number times a negative number equals a negative number. A negative number times a positive number equals a negative number."]*

$$(+) \times (-) = (-)$$

$$(-) \times (+) = (-)$$

This is a multiplication problem.

> *Point to the multiplication problem as the TTS or TA reads the graphic description.*
>
> *[Graphic description: "negative six times positive four equals negative twenty-four."]*

$$(-6) \times (+4) = (-24)$$

Item 17, continued

This is another multiplication problem.

Point to the multiplication problem as the TTS or TA reads the graphic description.

[Graphic description: "negative two times positive five equals"]

$$(-2) \times (+5) =$$

What does *[Graphic description: "negative two times positive five"]* **(-2) × (+5)** equal?

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: "A. positive ten"]

A. $+10$

[Graphic description: "B. negative seven"]

B. -7

[Graphic description: "C. negative ten"]

C. -10

Calculator may be used on this item.

Item 18

This item is about using a proportion to solve a word problem.

A proportion is two ratios that are equal.

Gabby is buying a chess set for her school club. The chess set is priced at *[Graphic description: "forty dollars"]* $40. In addition to the price, Gabby will have to pay *[Graphic description: "five percent"]* 5% tax.

Solve this proportion to find the tax on the chess set.

Point to the proportion as TTS or TA reads the graphic description.

[Graphic description: "t divided by forty equals five divided by one hundred."]

$$\frac{\mathbf{t}}{40} = \frac{5}{100}$$

The letter **t** stands for the tax.

Point to the variable, **t**, *in the proportion.*

What is the total price of the chess set, including the tax?

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: "A. thirty-eight dollars"]

A. $38

[Graphic description: "B. forty-two dollars"]

B. $42

[Graphic description: "C. forty-five dollars"]

C. $45

Calculator may be used on this item.

Provide student with Line Graph 1, "Ryan's Ticket Prices" from the Grade 7 Mathematics Practice Test Reference Materials.

Item 19

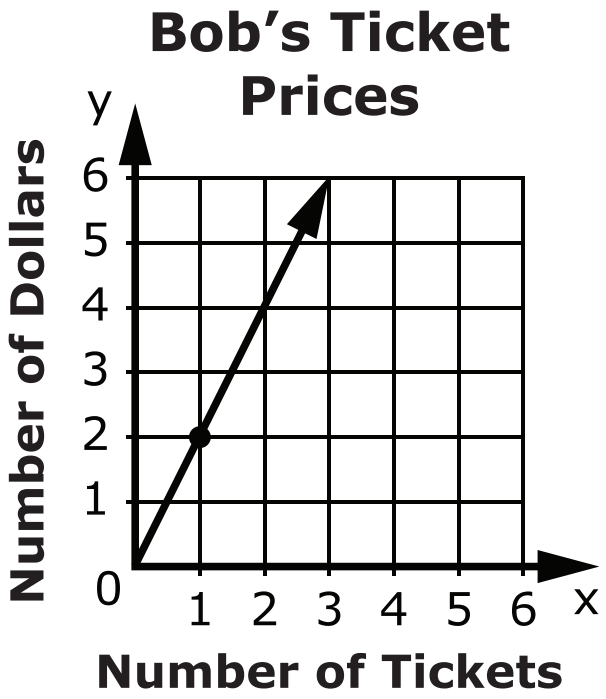
This item is about proportional relationships.

A proportional relationship exists when one quantity changes directly with another quantity.

This graph shows how many dollars Bob charges for each ticket he sells.

Point to the graph as the TTS or TA reads the graphic description.

[Graphic description: "This is a line graph titled, 'Bob's Ticket Prices.' The x-axis starts at zero and has six equally spaced marks increasing by ones moving to the right. It is labeled 'Number of Tickets.' The y-axis starts at zero and has six equally spaced marks increasing by ones moving upward. It is labeled 'Number of Dollars.'"]



Bob charges *[Graphic description: "two dollars"]* $2 for each ticket he sells.

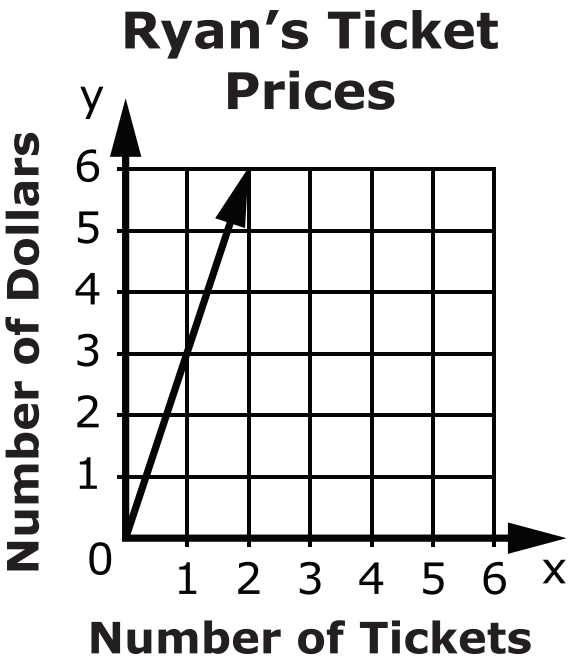
Point to the point (1, 2) on the graph.

Item 19, continued

This is another graph. This graph shows how many dollars Ryan charges for each ticket he sells.

Point to the graph as the TTS or TA reads the graphic description.

[Graphic description: "This is a line graph titled, 'Ryan's Ticket Prices.' The x-axis starts at zero and has six equally spaced marks increasing by ones moving to the right. It is labeled 'Number of Tickets.' The y-axis starts at zero and has six equally spaced marks increasing by ones moving upward. It is labeled 'Number of Dollars.'"]



Item 19, continued

How many dollars does Ryan charge for every 1 ticket he sells?

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: "A. one dollar"]

A. $1

[Graphic description: "B. three dollars"]

B. $3

[Graphic description: "C. six dollars"]

C. $6

Calculator may be used on this item.

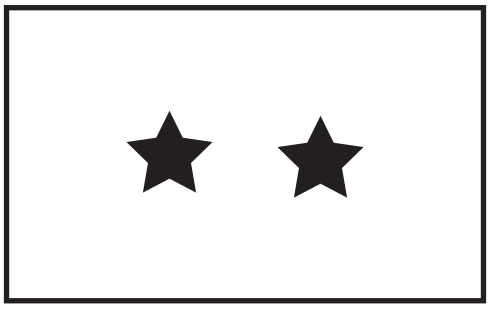
Item 20

This item is about a ratio.

> *Point to the picture of the rectangle.*

This rectangle has 2 stars.

> *[For students with visual impairment, read "This is a picture of two stars inside one rectangle."]*



The ratio of stars to rectangles is 2 to 1.

Item 20, continued

Which circle has a 2 stars to 1 circle ratio?

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: "A. two stars inside one circle”]

A. 

[Graphic description: “B. three stars inside one circle”]

B. 

Session 2

Calculator may be used on this item.

Provide student with Picture 1 showing pencils and equation from the Grade 7 Mathematics Practice Test Reference Materials.

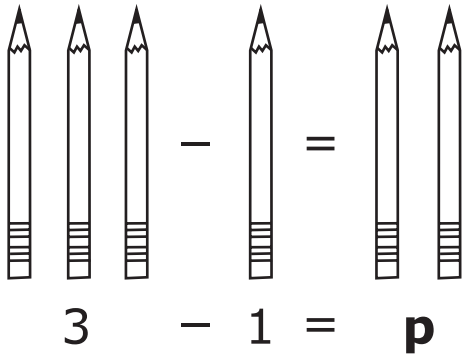
Item 21

This item is about a word problem.

Ms. Jones had 3 pencils. She gave 1 pencil to a student.

Point to the picture as the TTS or TA reads the graphic description.

[Graphic description: "Three minus one equals p."]



What does **p** stand for?

Point to each option as the TTS or TA reads each option.

the number of pencils Ms. Jones had left

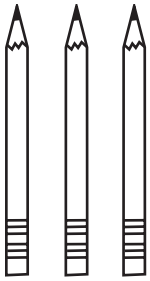
[For students with visual impairment, read: "A. This is a picture of two pencils."]

A. 

Item 21, continued

the number of pencils Ms. Jones started with

[For students with visual impairment, read: "B. This is a picture of three pencils."]

B. 

Calculator may be used on this item.

Provide student with Data Table 4, "Books Read" from the Grade 7 Mathematics Practice Test Reference Materials.

Item 22

This item is about a data table.

This data table shows how many books Tom read over 3 weeks.

Point to the data table as the TTS or TA reads the graphic description.

[Graphic description: "This is a data table titled, 'Books Read.' It shows the total number of books read over numbers of weeks. In week one, two books were read. In week two, four books were read. In week three, six books were read."]

Books Read

Week	Total Number of Books Read
1	2
2	4
3	6

What happened to the total number of books read as the number of weeks increased?

Point to the data table.

Point to each option as the TTS or TA reads each option.

A. The total number of books read **increased** each week.

B. The total number of books read **decreased** each week.

Calculator may be used on this item.

Provide student with Bar Graph 3, "Wear a Backpack" from the Grade 7 Mathematics Practice Test Reference Materials.

Item 23

This item is about a bar graph.

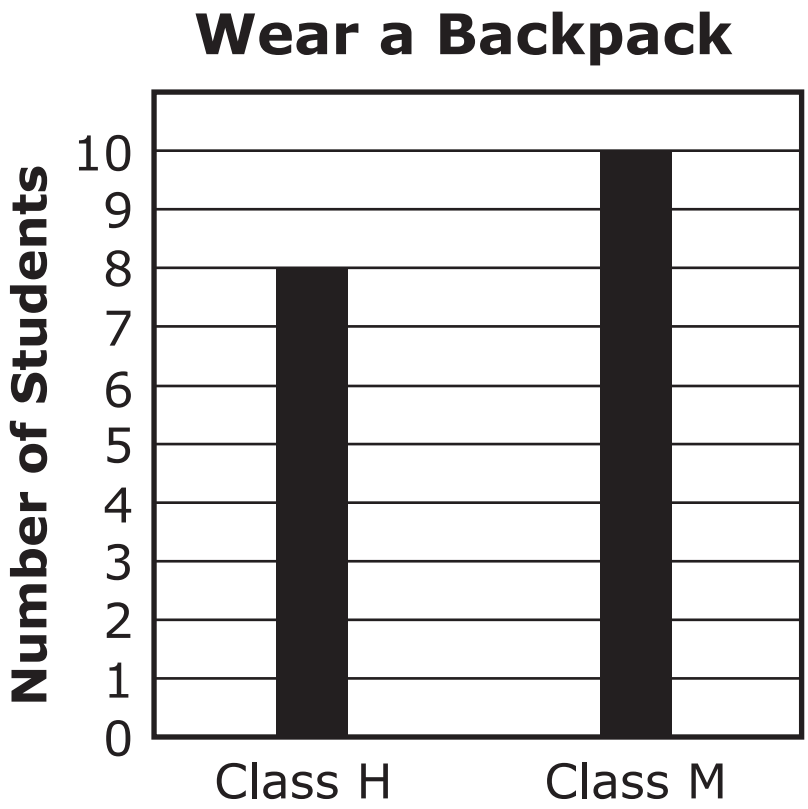
This bar graph shows the number of students in two classes who wear a backpack to school.

[For students with visual impairment, read "This is a picture of a student wearing a backpack."]

Point to the bar graph as the TTS or TA reads the graphic description.

[Graphic description: "This is a bar graph titled, 'Wear a Backpack.' It shows the numbers of students in Class H and Class M who wear a backpack to school. Eight students from Class H and ten students from Class M wear a backpack to school."]

Item 23, continued



According to the bar graph, which statement is a correct comparison of the numbers of students who wear a backpack to school?

Point to each option as the TTS or TA reads each option.

A. **More** students in Class H wear a backpack to school than in Class M.

B. **Less** students in Class H wear a backpack to school than in Class M.

C. The **same** number of students in Class H and in Class M wear a backpack to school.

Calculator may be used on this item.

Provide student with Formula 1 showing the area of a circle from the Grade 7 Mathematics Practice Test Reference Materials.

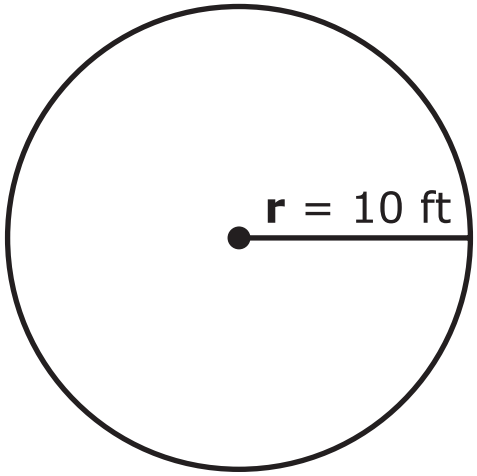
Item 24

This item is about finding the area of a circle.

This is a circle.

Point to the circle and radius as the TTS or TA reads the graphic description.

[Graphic description: "This is a circle. It has a radius of ten feet."]



This is the formula for finding the area of a circle.

Point to the formula as the TTS or TA reads the graphic description.

[Graphic description: "Area equals three and fourteen hundredths times r times r. Area equals three and fourteen hundredths times blank times blank."]

$$\text{Area} = 3.14 \times \mathbf{r} \times \mathbf{r}$$

$$\text{Area} = 3.14 \times \_ \times \_$$

Item 24, continued

A letter can stand for a number in an equation.

The letter **r** in this equation stands for the radius. The radius of this circle is 10 feet.

Point to the radius and the number 10 in the circle.

Which equation shows how to find the area of the circle?

Point to the circle.

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: "A. Area equals three and fourteen hundredths times ten."]

A. $\text{Area} = 3.14 \times 10$

[Graphic description: "B. Area equals three and fourteen hundredths plus ten plus ten."]

B. $\text{Area} = 3.14 + 10 + 10$

[Graphic description: "C. Area equals three and fourteen hundredths times ten times ten."]

C. $\text{Area} = 3.14 \times 10 \times 10$

Calculator may be used on this item.

Provide student with Line Graph 2, "Gail's Work Rate" from the Grade 7 Mathematics Practice Test Reference Materials.

Item 25

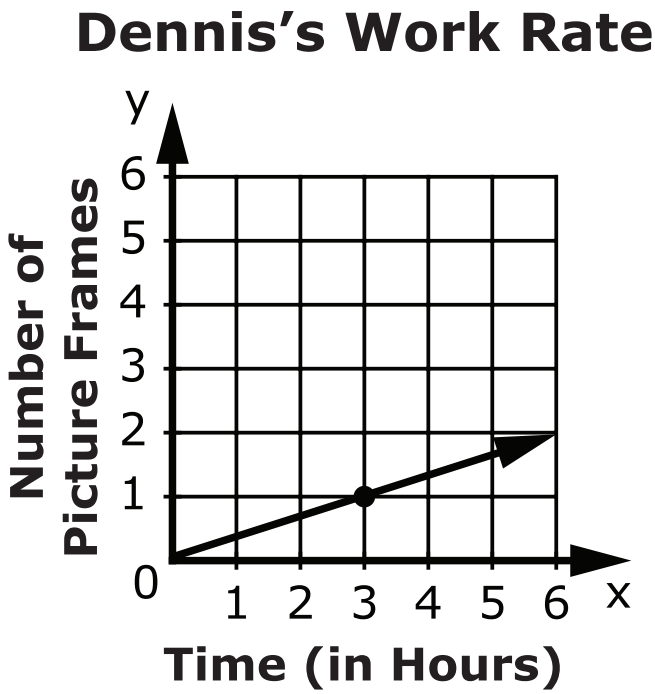
This item is about proportional relationships.

A proportional relationship exists when one quantity changes directly with another quantity.

Dennis recorded how many picture frames he built each hour for one day. Dennis worked at a constant rate. He put the data in this graph.

Point to the graph as the TTS or TA reads the graphic description.

[Graphic description: "This is a line graph titled, 'Dennis's Work Rate.' The x-axis starts at zero and has six equally spaced marks increasing by ones moving to the right. It is labeled 'Time (in Hours).' The y-axis starts at zero and has six equally spaced marks increasing by ones moving upward. It is labeled 'Number of Picture Frames.'"]



Item 25, continued

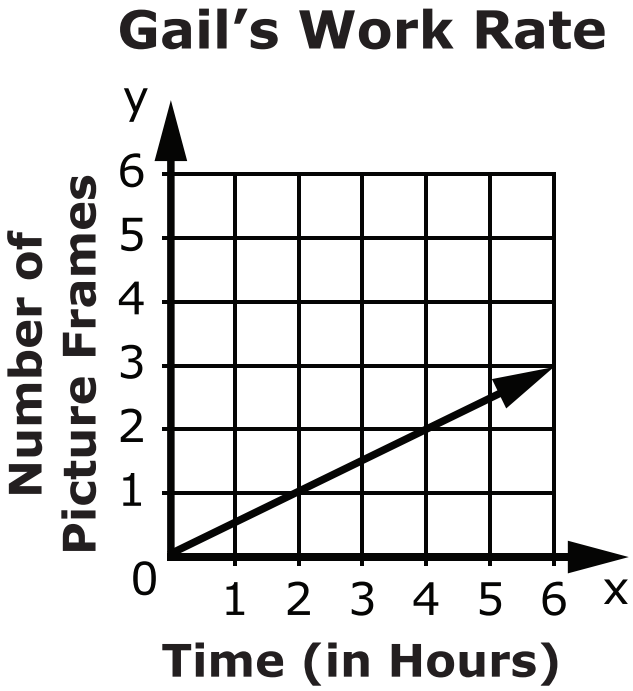
Dennis built 1 picture frame in 3 hours.

Point to the point (3, 1) on the graph.

This is another graph. This shows how many picture frames Gail built each hour. Gail worked at a constant rate.

Point to the graph as the TTS or TA reads the graphic description.

[Graphic description: "This is a line graph titled, 'Gail's Work Rate.' The x-axis starts at zero and has six equally spaced marks increasing by ones moving to the right. It is labeled 'Time (in Hours).' The y-axis starts at zero and has six equally spaced marks increasing by ones moving upward. It is labeled 'Number of Picture Frames.'"]



Item 25, continued

How many picture frames did Gail build in 4 hours?

Point to each option as the TTS or TA reads each option.

A. 1 picture frame

B. 2 picture frames

C. 3 picture frames

Calculator may be used on this item.

Item 26

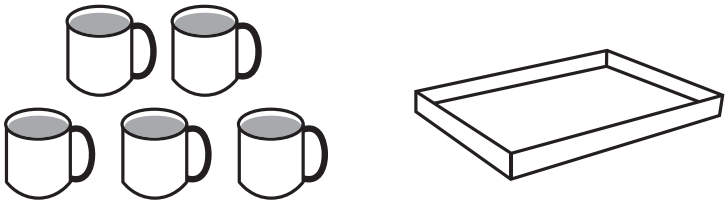
This item is about solving a problem using a ratio.

A ratio is a comparison between two quantities.

Rachel placed 5 cups on each tray.

Point to the picture.

[For students with visual impairment read, "This is a picture of five cups. Next to the cups is one tray."]



This is a ratio of 5 cups to 1 tray.

Point to the ratio as the TTS or TA reads the graphic description.

[Graphic description: "five to one"]

5 to 1

With the ratio of 5 to 1, how many cups are needed for 3 trays?

Point to each option as the TTS or TA reads each option.

A. 5 cups

B. 8 cups

C. 15 cups

Calculator may be used on this item.

Item 27

This item is about multiplication.

When a positive number and a negative number are multiplied together, the answer is a negative number.

Point to the equation as the TTS or TA reads the graphic description.

[Graphic description: "A positive number times a negative number equals a negative number. A negative number times a positive number equals a negative number."]

$$(+) \times (-) = (-)$$

$$(-) \times (+) = (-)$$

This is a multiplication problem.

Point to the multiplication problem as the TTS or TA reads the graphic description.

[Graphic description: "Negative one times positive nine equals negative nine."]

$$(-1) \times (+9) = (-9)$$

This is another multiplication problem.

Point to the multiplication problem as the TTS or TA reads the graphic description.

[Graphic description: "negative six times positive three equals"]

Item 27, continued

$$(-6) \times (+3) =$$

What does *[Graphic description: "negative six times positive three"]* **(-6) × (+3)** equal?

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: "A. negative eighteen"]

A. -18

[Graphic description: "B. positive eighteen"]

B. $+18$

[Graphic description: "C. negative three"]

C. -3

Calculator may be used on this item.

Provide student with Rectangular Prism and Net 2 from the Grade 7 Mathematics Practice Test Reference Materials.

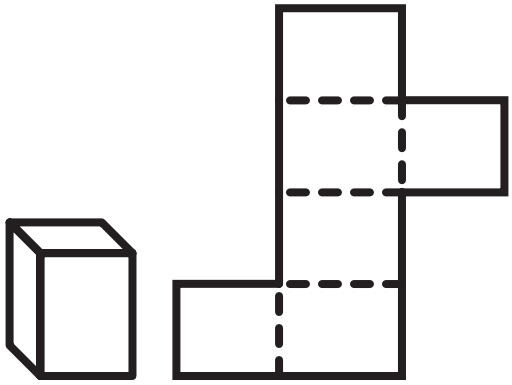
Item 28

This item is about how to use a net to find the surface area of a three-dimensional figure.

A net is what a three-dimensional figure would look like if it was unfolded and laid flat.

This is a picture of a rectangular prism and its net.

Point to the picture of the rectangular prism and its net.



Each rectangle in the net shows a face of the prism.

Point to one face on the three-dimensional figure.

The prism's net can be used to find the surface area of the figure. The surface area is the area of all the faces of the figure added together. This rectangular prism has 6 faces.

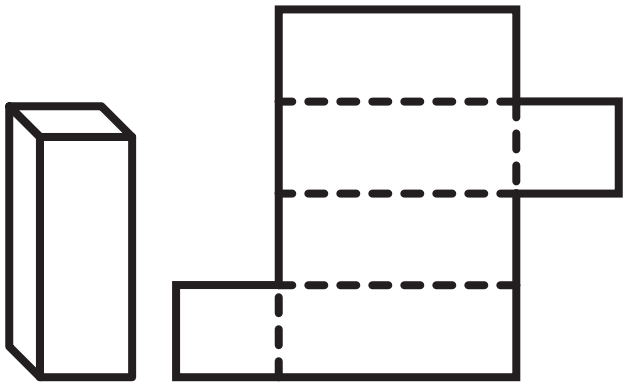
Point to each face in the figure's net.

Item 28, continued

This is another three-dimensional figure and its net.

Point to the picture of a rectangular prism and its net.

[For students with visual impairment, read "This is a picture of a three-dimensional figure and its net."]



How many faces are there on this three-dimensional figure?

Point to the rectangular prism.

Point to each option as the TTS or TA reads each option.

A. 1

B. 4

C. 6

Calculator may be used on this item.

Item 29

This item is about using a proportion to solve a word problem.

A proportion is two ratios that are equal.

This is a word problem.

Anton is buying a shirt. The shirt is normally priced at *[Graphic description: "thirty-two dollars"]* $32 but is on sale for *[Graphic description: "twenty-five percent"]* 25% off.

Point to the picture.

To find out how much the discount on the shirt is, first set up a proportion like this one.

Point to the proportion as the TTS or TA reads the graphic description.

[Graphic description: "discount divided by normal price equals percent off divided by one hundred."]

$$\frac{\text{discount}}{\text{normal price}} = \frac{\text{percent off}}{100}$$

Item 29, continued

This proportion can be used to find the discount on the shirt.

Point to the proportion as the TTS or TA reads the graphic description.

[Graphic description: "d divided by thirty-two equals twenty-five divided by one hundred."]

$$\frac{\mathbf{d}}{32} = \frac{25}{100}$$

The letter **d** stands for the discount.

Point to the variable, **d***, in the proportion.*

The fraction *[Graphic description: "twenty-five divided by one hundred"]* $\frac{\mathbf{25}}{\mathbf{100}}$ equals **25%**.

Point to twenty-five divided by one hundred in the proportion.

The discount can be found by solving for d**.**

[Graphic description: "d equals eight."]

$$\mathbf{d} = 8$$

The discount for the shirt is *[Graphic description: "eight dollars"]* $8.

This is another word problem.

Item 29, continued

Anton is also buying a belt. The belt is normally priced at *[Graphic description: "twenty dollars"]* $20 but is on sale for *[Graphic description: "ten percent"]* 10% off.

Point to the picture.

Let **d** stand for the discount.

Which proportion can be used to find how much the discount for the belt is?

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: "A. d divided by twenty equals ten divided by one hundred, the discount is two dollars."]

A. $\frac{\mathbf{d}}{20} = \frac{10}{100}$ the discount is $2

[Graphic description: "B. Twenty divided by d equals ten divided by one hundred, the discount is five dollars."]

B. $\frac{20}{\mathbf{d}} = \frac{10}{100}$ the discount is $5

[Graphic description: "C. one hundred divided by twenty equals d divided by ten, the discount is ten dollars."]

C. $\frac{100}{20} = \frac{\mathbf{d}}{10}$ the discount is $10

Calculator may be used on this item.

Provide student with Bar Graph 4, "Favorite Movie Types" from the Grade 7 Mathematics Practice Test Reference Materials.

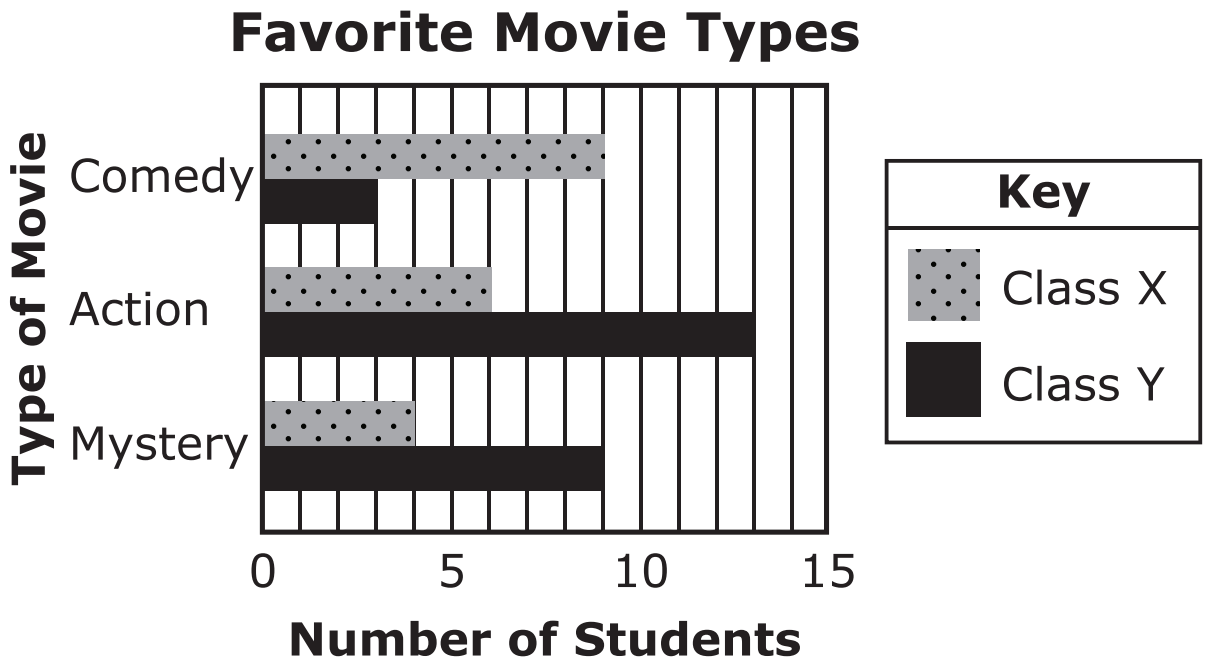
Item 30

This item is about a bar graph.

This bar graph shows the favorite types of movies chosen by students in Class X and in Class Y.

Point to the bar graph as the TTS or TA reads the graphic description.

[Graphic description: "This is a bar graph titled 'Favorite Movie Types.' It shows three types of movies and the numbers of students in two different classes who chose each type. Nine students from Class X and three students from Class Y chose Comedy as their favorite movie type. Six students from Class X and thirteen students from Class Y chose Action as their favorite movie type. Four students from Class X and nine students from Class Y chose Mystery as their favorite movie type."]



The key shows which bars are for Class X and which bars are for Class Y.

Point to the bars for Class X and Class Y on the graph as you read the labels in the key.

Item 30, continued

According to the bar graph, how many **more** students in Class X than in Class Y chose Comedy as their favorite type of movie?

Point to each option as the TTS or TA reads each option.

A. 9

B. 6

C. 3

Calculator may be used on this item.

Counters or other manipulatives may be used to solve the problem.

Item 31

This item is about division.

Dividing a positive number and a negative number always gives a negative number as an answer.

Point to each equation as the TTS or TA reads the graphic description.

[Graphic description: "A positive number divided by a negative number equals a negative number. A negative number divided by a positive number equals a negative number."]

$$(+) \div (-) = (-)$$

$$(-) \div (+) = (-)$$

This is a division problem.

Point to the division problem as the TTS or TA reads the graphic description.

[Graphic description: "negative ten divided by positive five equals negative two."]

$$(-10) \div (+5) = (-2)$$

Item 31, continued

This is another division problem.

Point to the division problem as the TTS or TA reads the graphic description.

[Graphic description: "negative twelve divided by positive three equals"]

$$(-12) \div (+3) =$$

What does *[Graphic description: "negative twelve divided by positive three"]* **(–12) ÷ (+3)** equal?

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: "A. negative fifteen"]

A. -15

[Graphic description: "B. positive four"]

B. $+4$

[Graphic description: "C. negative four"]

C. -4

Calculator may be used on this item.

Provide student with Cube and Net 3 from the Grade 7 Mathematics Practice Test Reference Materials.

Item 32

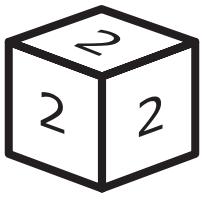
This item is about finding the surface area of a cube.

The surface area of a cube is the areas of all the faces of the cube added together.

This is a picture of a cube.

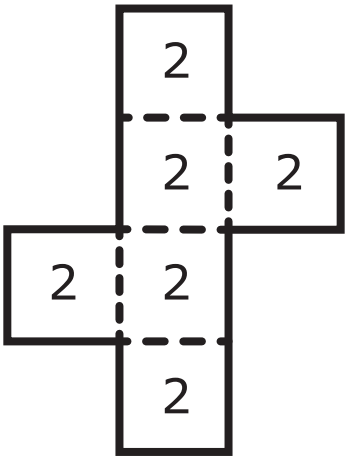
Point to the picture of the cube with a face area of 2 square units.

[For students with visual impairment, read "This is a picture of a cube. The area of each face on the cube is two square units."]



The net is what the cube would look like if it was unfolded and laid flat.

Point to the net of the cube.



The net shows that this cube has 6 faces.

Point to the equation as the TTS or TA reads the graphic description.

Item 32, continued

[Graphic description: "two plus two plus two plus two plus two plus two equals twelve."]

$$2 + 2 + 2 + 2 + 2 + 2 = 12$$

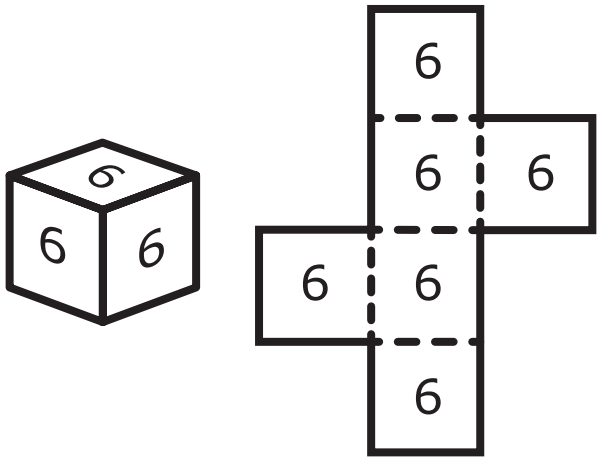
The surface area of this cube is 12 square units.

This is a picture of another cube and its net.

Point to the picture of the cube and its net.

Each face on this cube has an area of 6 square units.

Point to a face showing 6 square units.



What is the surface area of this cube?

Point to the picture of the cube with a face area of 6 square units.

Point to each option as the TTS or TA reads each option.

A. 6 square units

B. 18 square units

C. 36 square units

Calculator may be used on this item.

Counters or other manipulatives may be used to solve the problem.

Item 33

This item is about division.

When a negative number is divided by a negative number, the answer is a positive number.

Point to the equation as the TTS or TA reads the graphic description.

[Graphic description: "A negative number divided by a negative number equals a positive number."]

$$(-) \div (-) = (+)$$

This is a division problem.

Point to the division problem as the TTS or TA reads the graphic description.

[Graphic description: "negative ten divided by negative five equals"]

$$(-10) \div (-5) =$$

Start by dividing 10 by 5 to solve this problem. The answer is 2.

Then look again at the division problem. The symbols before each number are negative.

Point to the negative symbols in front of the 10 and the 5 in the division problem.

The two negative symbols make the answer positive.

[Graphic description: "negative ten divided by negative five equals positive two."]

$$(-10) \div (-5) = (+2)$$

Item 33, continued

This is another division problem.

Point to the division problem as the TTS or TA reads the graphic description.

[Graphic description: “negative eight divided by negative two equals”]

$$(-8) \div (-2) =$$

What does *[Graphic description: “negative eight divided by negative two”]* (-8) ÷ (-2) equal?

Point to each option as the TTS or TA reads each graphic description.

[Graphic description: “A. negative four”]

A. -4

[Graphic description: “B. positive four”]

B. $+4$

[Graphic description: “C. positive six”]

C. $+6$

Calculator may be used on this item.

Item 34

This item is about solving a word problem using a ratio.

A ratio is a comparison between two quantities.

Leo planted 10 flowers in 5 minutes. The number of flowers planted and the number of minutes it took Leo to plant them can be written as a ratio.

Point to the ratio as the TTS or TA reads the graphic description.

[Graphic description: "ten to five"]

10 : 5

The number of flowers Leo planted per minute can be found by dividing both sides of the ratio by 5. This gives the ratio of 2 flowers to 1 minute.

Point to the ratio as the TTS or TA reads the graphic description.

[Graphic description: "two to one"]

2 : 1

This is another ratio problem.

Annie planted 24 flowers in 8 minutes.

How many flowers did Annie plant in 1 minute?

Point to each option as the TTS or TA reads each option.

A. 3 flowers

B. 6 flowers

C. 12 flowers

This page is intentionally blank.

LEAP CONNECT

Practice Test