

Example Items

Mathematics 6

Mathematics 6 Example Items are a **representative set** of items for the ACP. Teachers may use this set of items along with the test blueprint as guides to prepare students for the ACP. On the last page, the correct answer, content SE and SE justification are listed for each item.

*The specific part of an SE that an Example Item measures is **NOT** necessarily the only part of the SE that is assessed on the ACP.* None of these Example Items will appear on the ACP.

Teachers may provide feedback regarding Example Items.

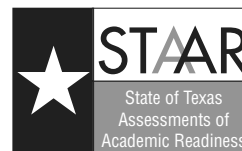
(1) Download the [Example Feedback Form](#) and email it. The form is located on the homepage of Assessment.dallasisd.org.

OR

(2) To submit directly, click “Example Feedback” **after** you login to the [Assessment website](#).

First Semester
2018–2019
Code #: 1061
(Version 2: 12/6/18)

STAAR GRADE 6 MATHEMATICS REFERENCE MATERIALS



AREA

Triangle

$$A = \frac{1}{2}bh$$

Rectangle or parallelogram

$$A = bh$$

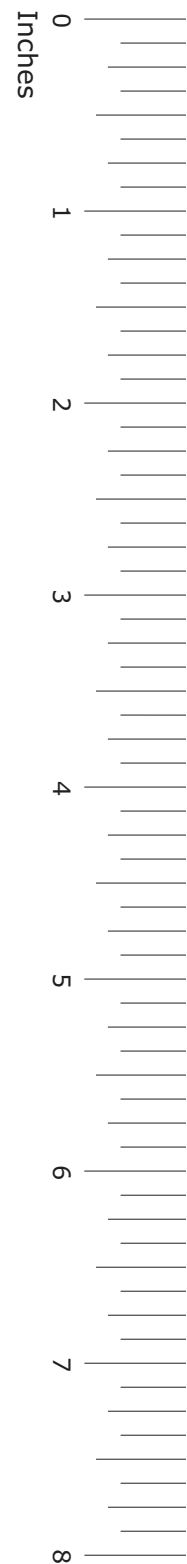
Trapezoid

$$A = \frac{1}{2}(b_1 + b_2)h$$

VOLUME

Rectangular prism

$$V = Bh$$



STAAR GRADE 6 MATHEMATICS REFERENCE MATERIALS

LENGTH

Customary

1 mile (mi) = 1,760 yards (yd)

1 yard (yd) = 3 feet (ft)

1 foot (ft) = 12 inches (in.)

Metric

1 kilometer (km) = 1,000 meters (m)

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

VOLUME AND CAPACITY

Customary

1 gallon (gal) = 4 quarts (qt)

1 quart (qt) = 2 pints (pt)

1 pint (pt) = 2 cups (c)

1 cup (c) = 8 fluid ounces (fl oz)

Metric

1 liter (L) = 1,000 milliliters (mL)

WEIGHT AND MASS

Customary

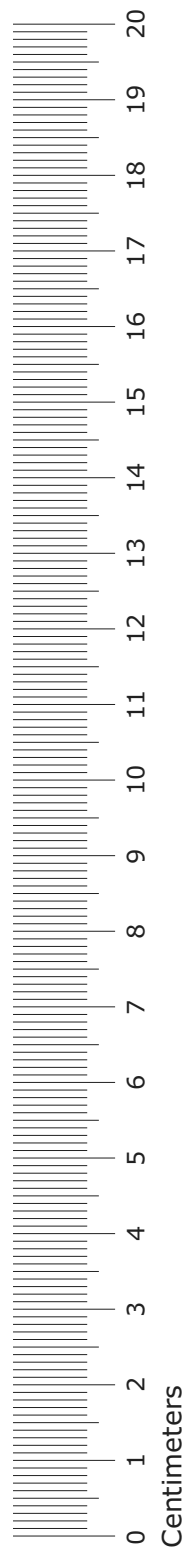
1 ton (T) = 2,000 pounds (lb)

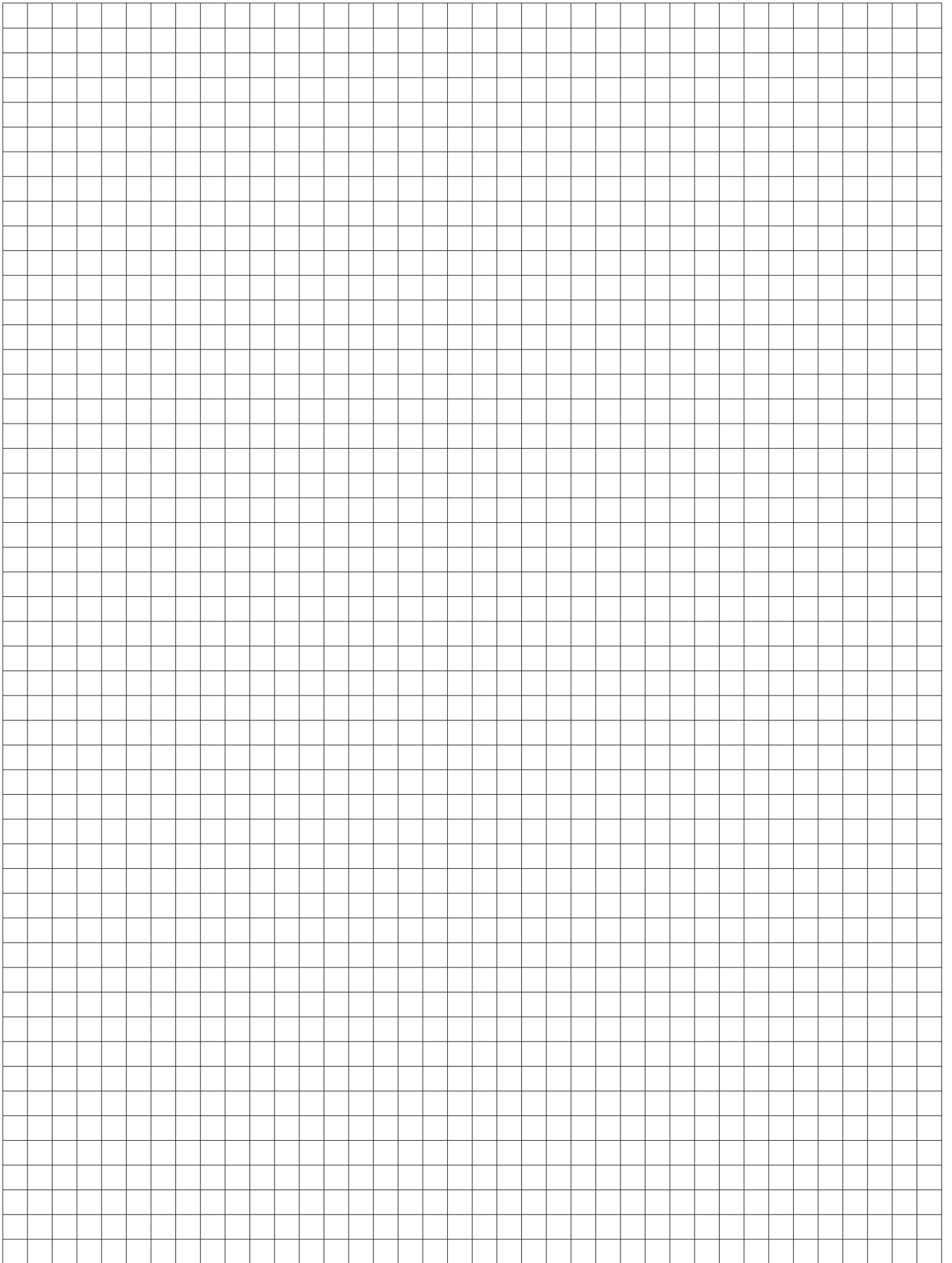
1 pound (lb) = 16 ounces (oz)

Metric

1 kilogram (kg) = 1,000 grams (g)

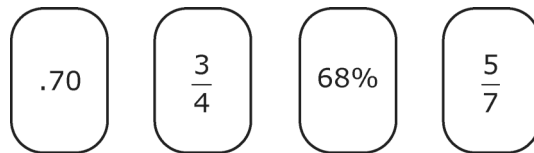
1 gram (g) = 1,000 milligrams (mg)





EXAMPLE ITEMS Mathematics 6, Sem 1

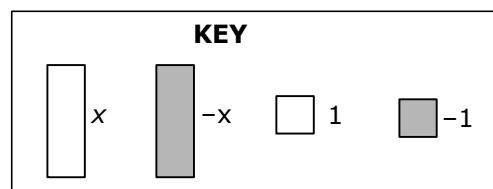
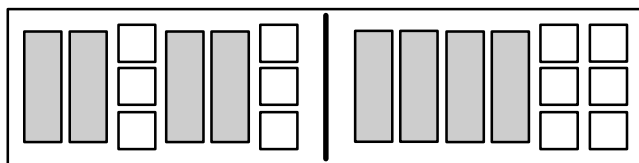
- 1 Yulie wanted to put her flash cards in order before putting them away.



What is the order from greatest to least?

- A** $\frac{3}{4}$ $.70$ $\frac{5}{7}$ 68%
- B** $\frac{3}{4}$ $\frac{5}{7}$ $.70$ 68%
- C** 68% $.70$ $\frac{5}{7}$ $\frac{3}{4}$
- D** 68% $\frac{5}{7}$ $.70$ $\frac{3}{4}$

- 2 Hanna created a model using algebra tiles to show that two expressions are equivalent.



Which expressions are equivalent to each other and reflect Hannah's model?

- A** $-2x + 3 = -4x + 6$
- B** $2x - 3 = 4x - 6$
- C** $2(-2x + 3) = -4x + 6$
- D** $2(2x - 3) = 4x - 6$

EXAMPLE ITEMS Mathematics 6, Sem 1

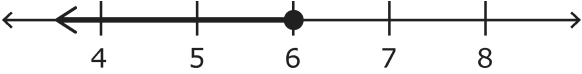
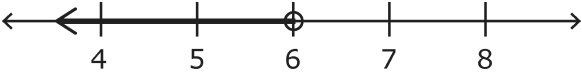
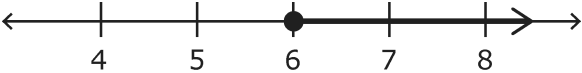
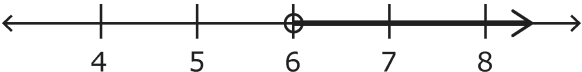
- 3** Wyatt has 32 marbles in his collection. Twenty of his marbles are red, four are blue, and the rest are green. What part of Wyatt's marbles are red?

- A** $\frac{1}{8}$
- B** $\frac{1}{4}$
- C** $\frac{3}{8}$
- D** $\frac{5}{8}$

- 4** According to her parents, Bonita must be at least 14 years old to see a movie without a chaperone. If she is 11 years old now, which inequality is used to find y , the number of years Bonita must wait until her parents will let her go to a movie unchaperoned?

- A** $11 + y > 14$
- B** $11 + y \geq 14$
- C** $11 + y < 14$
- D** $11 + y \leq 14$

- 5** Perla went to the State Fair of Texas with \$30 to spend on rides. Every ride costs \$5 worth of coupons. The inequality $30 \geq 5r$ is used to determine the maximum number of rides, r , she can ride. Which number line best represents the solution to this inequality?

- A** 
- B** 
- C** 
- D** 

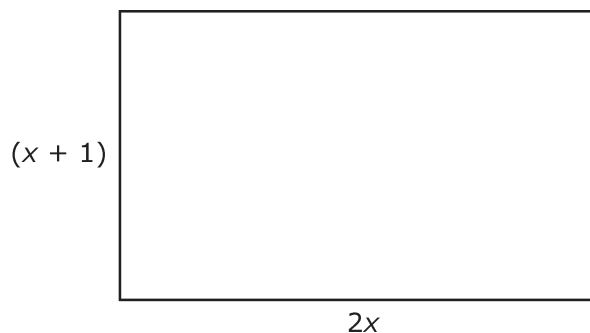
EXAMPLE ITEMS Mathematics 6, Sem 1

- 6 Chapman wants to purchase a gift for his mother that costs \$55.75. If he has already saved $\frac{2}{5}$ of this amount, how much money does Chapman have saved?

Record the answer and fill in the bubbles on the grid provided. Be sure to use the correct place value.

					.		
+	0	0	0	0		0	0
-	1	1	1	1		1	1
	2	2	2	2		2	2
	3	3	3	3		3	3
	4	4	4	4		4	4
	5	5	5	5		5	5
	6	6	6	6		6	6
	7	7	7	7		7	7
	8	8	8	8		8	8
	9	9	9	9		9	9

- 7 Oscar wrote the expression $2(x + 1) + 2(2x)$ to represent the perimeter of the rectangle shown.



Which expression is equivalent to Oscar's expression?

- A $3x + 1$
- B $3x + 2$
- C $6x + 1$
- D $6x + 2$

EXAMPLE ITEMS Mathematics 6, Sem 1

8 Which two expressions are equivalent?

- A $6(x - 4)$ and $6 \cdot x - 6 \cdot 4$
- B $(2 + x) \cdot 3$ and $2 + (x \cdot 3)$
- C $8 \div (9 - x)$ and $8 \div (x - 9)$
- D $(x + 5) \div 7$ and $x + (5 \div 7)$

9 An airplane is at 25% of its cruising altitude. If the plane is at 3,000 feet, what is the cruising altitude?

- A 750 feet
- B 2,250 feet
- C 12,000 feet
- D 75,000 feet

10 La'Vasha noticed that she caught six pigeons for every turtle when she played Pocket Monster Walk. If La'Vasha caught 102 pigeons, how many turtles did she catch?

Record the answer and fill in the bubbles on the grid provided. Be sure to use the correct place value.

					.		
+	0	0	0	0		0	0
-	1	1	1	1		1	1
	2	2	2	2		2	2
	3	3	3	3		3	3
	4	4	4	4		4	4
	5	5	5	5		5	5
	6	6	6	6		6	6
	7	7	7	7		7	7
	8	8	8	8		8	8
	9	9	9	9		9	9

EXAMPLE ITEMS Mathematics 6, Sem 1

- 11** Mya is catering a special event for 10 people. One of the recipes Mya uses requires 9 pounds of chicken and serves 15 people. How many pounds of chicken will Mya need in order to serve 10 people?

- A** 2 pounds
- B** 5 pounds
- C** 6 pounds
- D** 7 pounds

- 12** What is the prime factorization of 96?

- A** $2^5 \cdot 3$
- B** $2 \cdot 3 \cdot 4^2$
- C** $2 \cdot 3^5$
- D** $2 \cdot 3^2 \cdot 4^2$

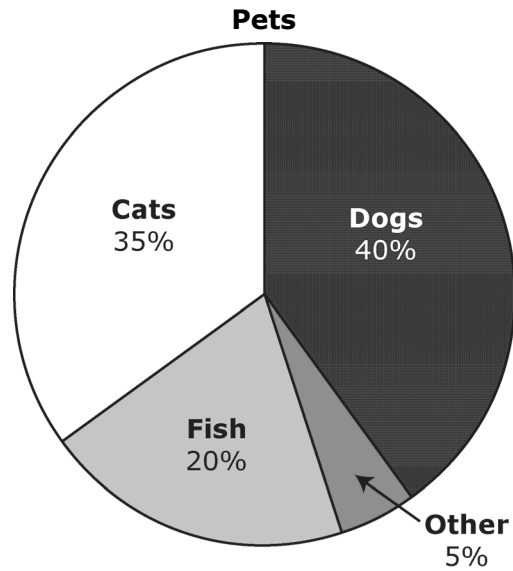
- 13** If Katie made 9 quarts of punch for a birthday party, how many ounces of punch did she make?

Record the answer and fill in the bubbles on the grid provided. Be sure to use the correct place value.

					.		
+	0	0	0	0		0	0
-	1	1	1	1		1	1
	2	2	2	2		2	2
	3	3	3	3		3	3
	4	4	4	4		4	4
	5	5	5	5		5	5
	6	6	6	6		6	6
	7	7	7	7		7	7
	8	8	8	8		8	8
	9	9	9	9		9	9

EXAMPLE ITEMS Mathematics 6, Sem 1

- 14 Mr. May surveyed his students about the pets they have at home. He displayed the results in a circle graph as shown.



If the students have a total of 120 pets, how many were dogs?

- A** 3
B 30
C 48
D 60
- 15 Soar High University theater arts students will perform in a theatrical production, "We Love to Dance." The cost of admission for each guest is shown in the table.

Theatrical Production Prices

Number of Guests, g	Admission Cost, c
1	\$7
2	\$14
3	\$21
4	\$28

Which equation is used to determine c , the cost of admission for g guests?

- A** $c = 7g$
B $c = 14g$
C $c = 2g + 5$
D $c = g + 6$

EXAMPLE ITEMS Mathematics 6, Sem 1

16 Which expression has a value of 2?











A $4(-5 - (-7)) \div 2 - 3$

B $8 + 3(5 - 9) \div 2$

C $[3(3 - 5) - (-9)] \div (-3)$

D $(1 + (-3)) \cdot (7 - 8) \div (-1)$

17 Orosia is playing a game by rolling two fair number cubes numbered 1–6. The results of the first five rounds are shown.

Round 1		
Round 2		
Round 3		
Round 4		
Round 5		

Orosia adds the numbers on both cubes for each round separately. Even sums on the number cubes for each round are scored as positive, and odd sums are scored as negative. What is Orosia's score after five rounds of play?

A -39

B -15

C -8

D -3

EXAMPLE ITEMS Mathematics 6 Key, Sem 1

Item#	Key	SE	SE Justification
1	B	6.2D	Order a set of rational numbers arising from mathematical and real-world contexts.
2	C	6.7C	Determine if two expressions are equivalent using concrete models, pictorial models, and algebraic representations.
3	D	6.4G	Generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money.
4	B	6.9A	Model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts.
5	A	6.9B	Represent solutions for one-variable, one-step equations on number lines.
6	22.30	6.3E	Multiply and divide positive rational numbers fluently.
7	D	6.7D	Generate equivalent expressions using the properties of operations: inverse, identity, commutative, associative, and distributive properties.
8	A	6.7D	Generate equivalent expressions using the properties of operations: inverse, identity, commutative, associative, and distributive properties.
9	C	6.5B	Solve real-world problems to find the whole given a part and the percent.
10	17	6.10A	Model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts.
11	C	6.4B	Apply qualitative and quantitative reasoning to solve prediction and comparison real-world problems involving ratios and rates.
12	A	6.7A	Generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization.
13	288	6.4H	Convert units within a measurement system, including the use of proportions and unit rates.
14	C	6.5B	Solve real-world problems finding the whole given a part and the percent, to find the part given the whole and the percent, and to find the percent given the part and the whole, including the use of concrete and pictorial models.
15	A	6.9A	Write one-variable, one-step equations and inequalities to represent constraints or conditions within problems.
16	B	6.3D	Add, subtract, multiply, and divide integers fluently.
17	D	6.3D	Add integers fluently.