# Correct	%	Levels:
0 → 17	0-49%	Did not meet grade level
18 → 25	50%-71%	Approaches grade level
26 → ~~30~~ 29	72%-85%	Meets grade level
30 → 36	86%-100%	Masters grade level

Houston ISD

OnTrack

Test Booklet

21-22_HISD_STAAR_G5_MTH_E_Apr4-22

Name

Answer Key: STAAR RELEASE

Date

April 5, 2022

$\frac{36}{36} = 100\%$

$\frac{35}{36} = 97\%$

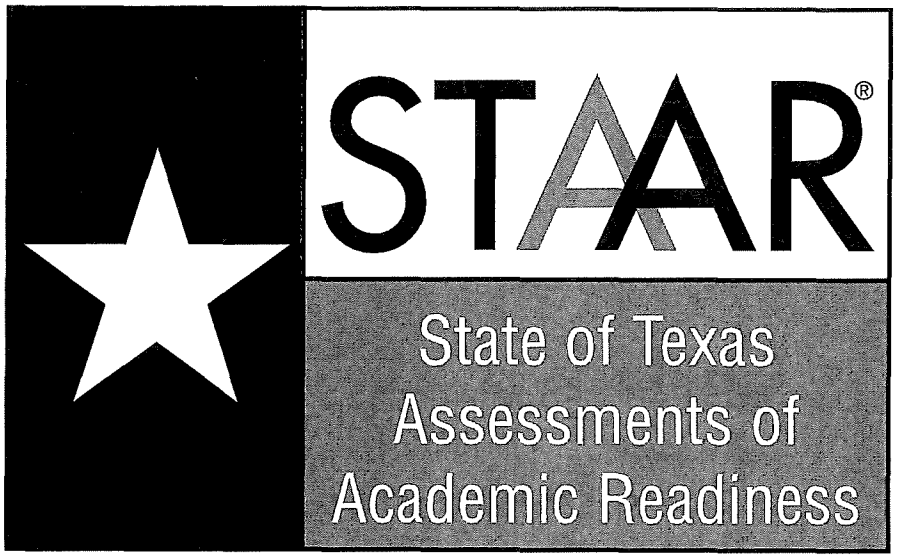
$\frac{34}{36} = 94\%$

$\frac{33}{36} = 92\%$

$\frac{32}{36} = 89\%$

$\frac{31}{36} = 86\%$

$\frac{30}{36} = 83\%$



GRADE 5

Mathematics

Administered May 2021

RELEASED

DIRECTIONS

Read each question carefully. For a multiple-choice question, determine the best answer to the question from the four answer choices provided. For a griddable question, determine the best answer to the question. Then fill in the answer on your answer document.

87%

1 Kelsi spends $6.75 every Saturday for breakfast. What is the total amount of money Kelsi spends on breakfast for 14 Saturdays?

A $94.50

B $20.75

C $92.30

D $33.75

How to solve: 14 X 6.75

Factors { 6.75 and 14

Product { 94.50

$$\begin{array}{r} {\scriptstyle 3\ 2} \\ 6.75 \\ \times\ \ 14 \\ \hline 2700 \\ +\ 6750 \\ \hline 94.50 \end{array}$$

① put the number with fewer digits on the bottom

② remember "zero the hero" to multiply by the tens place.

③ 2 digits in decimal place in factors, so 2 digits in decimal place in product

GO ON

84%

2 The table shows the relationship between the numbers of soft pretzels customers bought at a store and the total cost of the pretzels in dollars.

Soft Pretzels

Number of Soft Pretzels, x	Total Cost, y (dollars)
1	3.50
2	7.00
3	10.50
4	14.00

X	Y
1	3.50
2	7.00
3	10.50
4	14.00

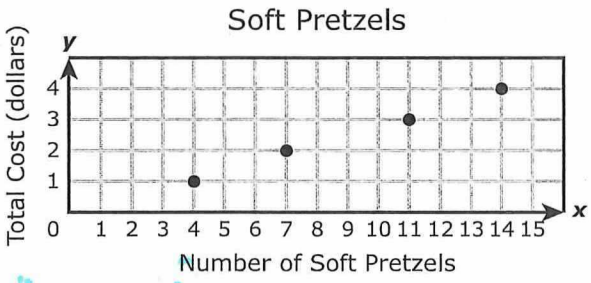
x3.50

$y = X * 3.50$

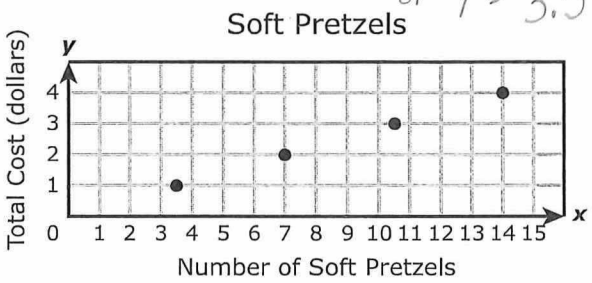
or $y = 3.5x$

Which graph best represents the data from the table?

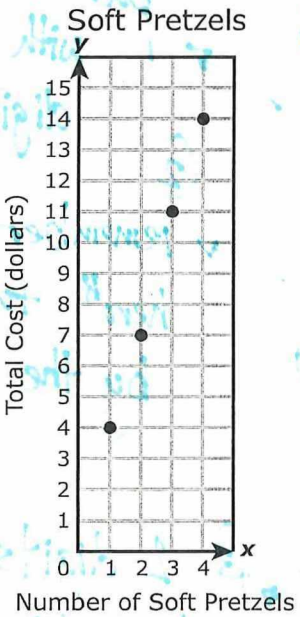
F



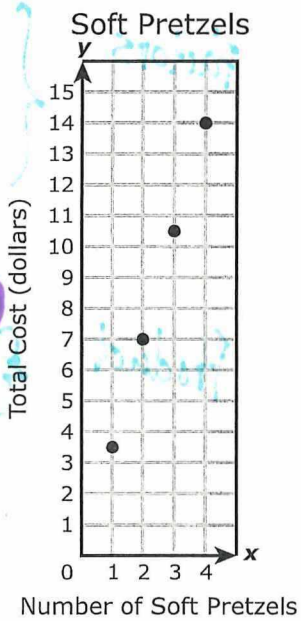
H



G



J



GO ON

93%

3 An elementary school had 90 boxes of glue sticks. Each box had 36 glue sticks. Teachers put all of the glue sticks into bags to give to the students. They put 6 glue sticks into each bag.

Which equation can be used to find b, the number of bags the teachers can fill with these glue sticks?

A $90 \times 36 \div 6 = b$

B $90 \div 6 + 36 = b$

C $36 \times 90 + 6 = b$

D $36 \times 6 \times 90 = b$

$90 \times 36 \div 6 = b$

[ ] ( )
× ÷
+ −

OR P E MD AS

91%

4 A rectangular prism has a length of 20 inches, a width of 11 inches, and a height of 13 inches. What is the volume in cubic inches of this rectangular prism?

F 233 cubic inches

G 2,860 cubic inches

H 160 cubic inches

J 88 cubic inches

$V = L \times W \times H$

$= 20 \times 11 \times 13$

$= 220 \times 13$

$= 2{,}860$

20	220
× 11	× 13
20	660
200	2200
220	2860

85%

5 Nicholas put 1,012 baseball cards into boxes. He put 22 cards in each box.

How many boxes did Nicholas need for these baseball cards?

A 55

B 50

C 46

D 47

$1{,}012 \div 22 = 46$

$22 \overline{)1{,}012}$ → 046

-88

132

-132

0

D
M
S
B

22 44 66

88 110 132

GO ON

88%

6 The mass in kilograms of an ice chest is shown in expanded notation.

$$(1 \times 10) + (3 \times 1) + (6 \times 0.1) + (1 \times 0.01)$$

What is this mass in kilograms, written as a numeral?

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

13.61 Kg

$(1 \times 10) + (3 \times 1) + (6 \times 0.1) + (1 \times 0.01)$

$= 10 + 3 + 0.6 + 0.01$

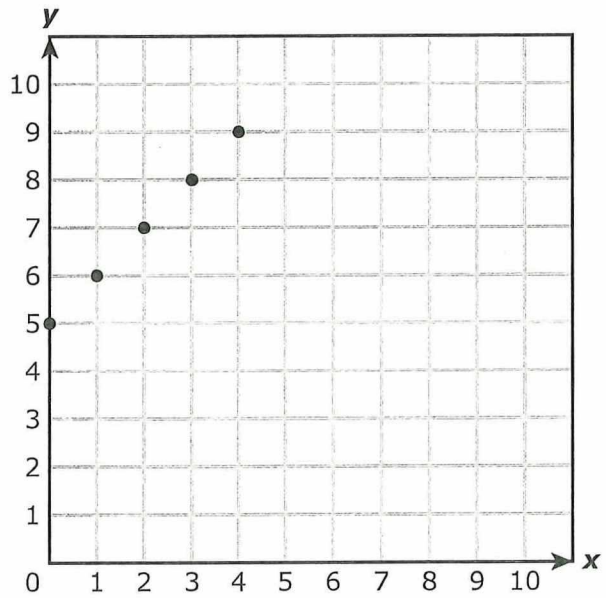
$= 13.61$

10.
3.
0.6
+ 0.01
13.61

GO ON

7 The points plotted on the coordinate grid represent the rule $y = x + 5$.

71%



X	Y
0	5
1	6
2	7
3	8
4	9

+5

$y = x + 5$

Which table also represents this rule?

A

x	y
9	4
11	6
14	9
20	15

$y = x - 5$

-5 -5 -5 -5

B

x	y
4	9
5	10
6	11
7	12

+5 +5 +5 +5

C

x	y
5	10
6	15
7	20
8	25

+5 +9 +13 +17

NO fixed relationship

D

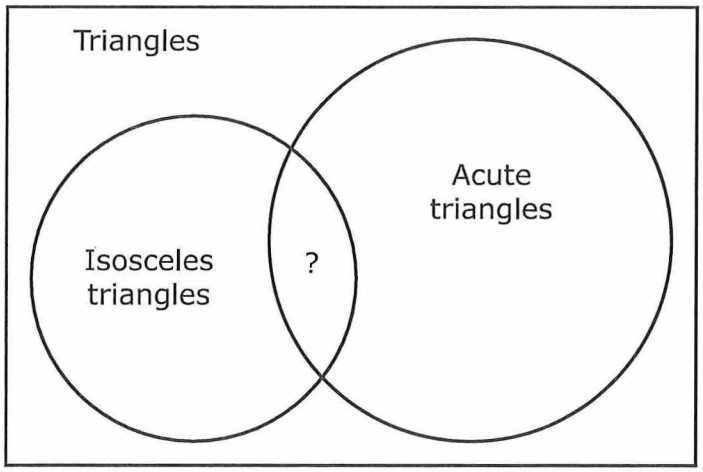
x	y
4	20
5	25
6	30
7	35

+16 +20 +25 +28

GO ON

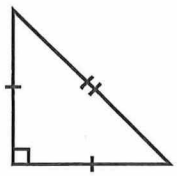
8 This Venn diagram shows the relationship between some types of triangles.

78%

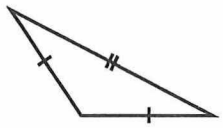


Which triangle belongs in the intersection of "Acute triangles" and "Isosceles triangles"?

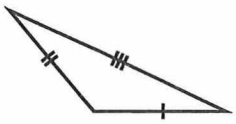
F



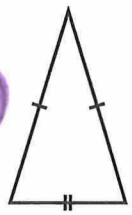
H



G



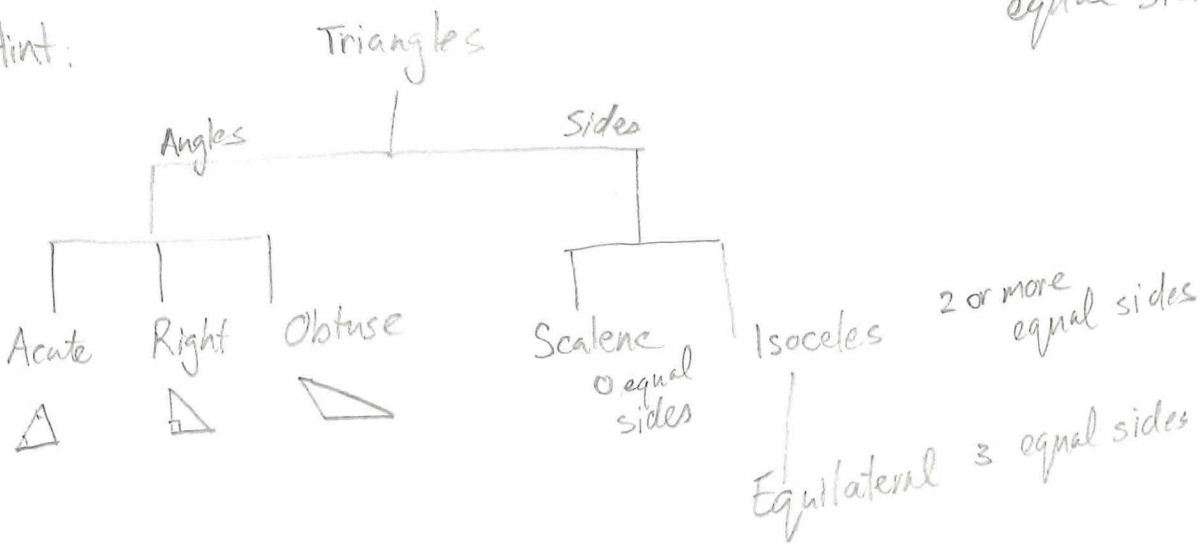
J



- Acute angles (less than 90°)
- and

two or more equal sides.

Hint:



GO ON

9 The table shows the times it took four runners to finish a race.

90%

Race Times

Runner	Time (minutes)
W	20.3
X	19.795
Y	20.35
Z	19.8

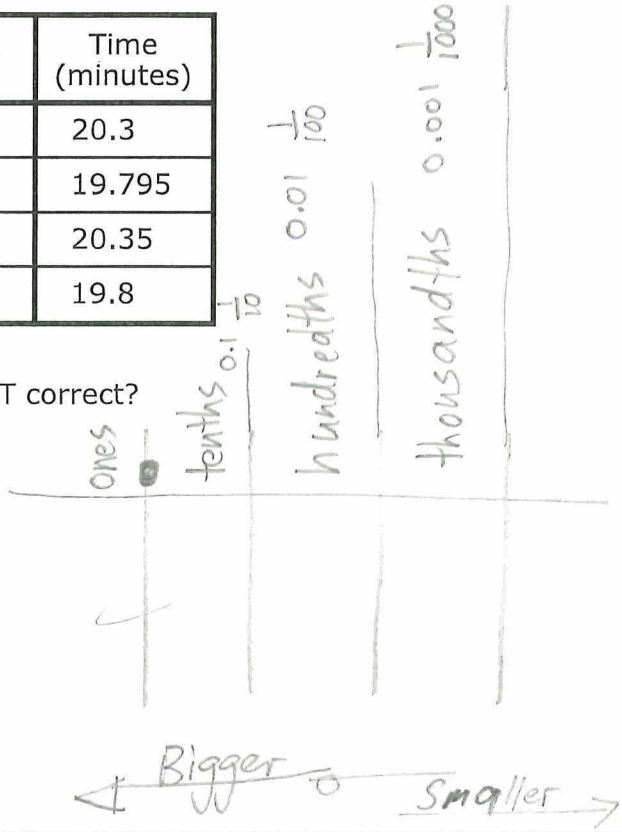
Which comparison of these times is NOT correct?

A $20.3 < 20.35$

B $19.795 > 19.8$

C $19.8 < 20.3$

D $20.35 > 19.795$



---

10 Ms. Fitzgerald had $2\frac{1}{4}$ gallons of fruit punch. She served $\frac{3}{8}$ gallon of the fruit punch to her family at lunch.

65%

How many gallons of fruit punch did Ms. Fitzgerald have left after lunch?

F $2\frac{1}{3}$ gal

G $1\frac{6}{8}$ gal

H $1\frac{1}{2}$ gal

J $1\frac{7}{8}$ gal

$2\frac{1}{4} - \frac{3}{8}$

$= 2\frac{2}{8} - \frac{3}{8}$

$= 1\frac{2+8}{8} - \frac{3}{8}$

$= 1\frac{10}{8} - \frac{3}{8}$

$= 1\frac{7}{8}$

① Find lowest common denominator

4	4, 8	12, 16
8	8, 16	

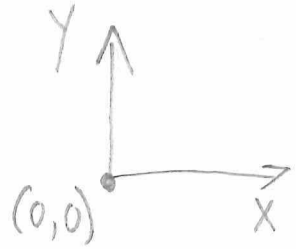
skip count

② Convert to equivalent fractions

$\frac{1}{4} \overset{\times 2}{=} \frac{?}{8} \rightarrow \frac{1}{4} = \frac{2}{8}$

③ Regroup from whole number

GO ON



81%

11 Which statement is NOT true about a coordinate grid?

A The vertical number line is the *y*-axis.

B In a coordinate grid, the *x*-axis and the *y*-axis are perpendicular to each other.

C The *x*-coordinate is the second number in an ordered pair.

D The origin is the intersection of the *x*-axis and the *y*-axis.

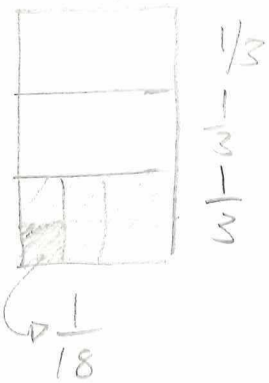
(x, y) x | y

74%

12 Angelina used $\frac{1}{3}$ of a bag of soil to fill 6 flowerpots. She filled each flowerpot with the same amount of soil.

How much soil did Angelina use to fill each flowerpot?

So: 18 pots
$\frac{1}{18}$ of a bag



F $\frac{1}{18}$ of a bag

G 18 bags pots

H $\frac{1}{2}$ of a bag

J 2 bags

$\frac{1}{3} \div 6$

K ◦ F

OR: $\frac{1}{3} \div 6$

$= \frac{1}{3} \times \frac{1}{6}$

$= \frac{1}{18}$

76%

13 Fabio drinks 2 quarts of water each day. How many cups of water does Fabio drink each day?

1 quart = 4 cups

so: 2 quarts = 8 cups

A 4 cups

B 16 cups

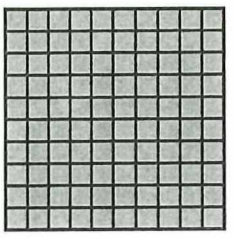
C 64 cups

D 8 cups

GO ON

14 This model is shaded to represent 1 whole.

72%



0.1

Which model represents $0.9 \times 0.4 = 0.36$?

0.4

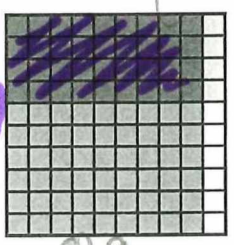
F

0.9

0.36

H

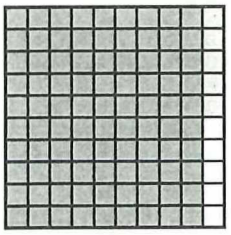
0.4



0.9

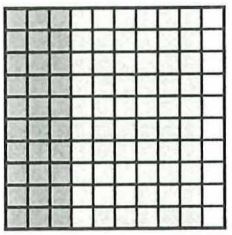
G

0.5



0.9

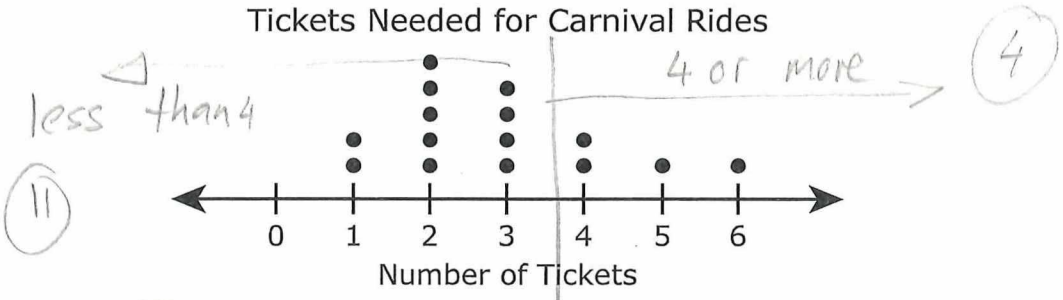
J



GO ON

15 The dot plot shows the number of tickets needed for each ride at a carnival.

69%



What is the difference between the number of rides that need fewer than 4 tickets and the number of rides that need 4 or more tickets?

A 7

B 2

C 9

D 4

↳ not: more than 4.

↳ subtraction

11 − 4 = 7

---

16 A cafeteria worker used 8.05 kilograms of meat to make 35 lunches. Each lunch had the same amount of meat.

82%

What was the mass in kilograms of the meat in each lunch?

8.05 kg ÷ 35

F 2.03 kg

G 0.23 kg

H 0.023 kg

J 2.3 kg

$$35 \overline{)\,8.05} = 0.23$$

-70

105

D
M
S
B

35 70 105 140

GO ON

74%

17 Two numbers are shown. A number in between is missing.

6.027 ☐ 6.009

Which number can be placed in the box to show the numbers in order from greatest to least?

A 6.25

B 6.02

C 6.005

D 6.028

1	0.1 1/10	0.01 1/100	0.001 1/1000
6	0	2	7
6	0	2	0
6	0	0	9

→ twenty is bigger than 9 but less than 27

87%

18 Last month a flower shop employee ordered 48 cases of roses. There were 144 roses in each case.

How many roses did this employee order?

F 5,482

G 1,728

H 6,912

J 4,844

+1 +1
+3 +3

$$\begin{array}{r} 144 \\ \times\ 48 \\ \hline 1152 \\ 5760 \\ + \\ \hline 6,912 \end{array}$$

57%

19 What is the value of this expression?

$10[3 + (7 + 5) \div 3]$

A 14

B 34

C 50

D 70

hint:

( ) [ ]
× ÷
+ −

( ) [ ] → if two, do inside first [( )]
× ÷
+ − → if both on same level, do left first

$10 \times [3 + (7+5) \div 3]$

$= 10 \times [3 + 12 \div 3]$

$= 10 \times [3 + 4]$

$= 10 \times 7$

$= 70$

GO ON

79%

20 The four figures shown are rectangular prisms made of unit cubes.

$V = L \times w \times h$
$V = 2 \times 3 \times 2 = 6 \times 2$
$= 12$

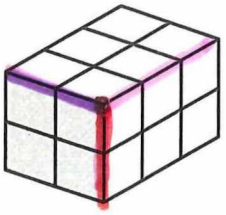


Figure I ✓

$V = L \times w \times h$
$= 4 \times 1 \times 3$
$= 4 \times 3$
$= 12$

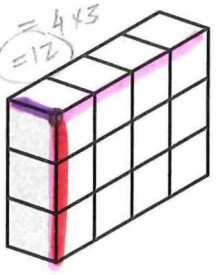


Figure II ✓

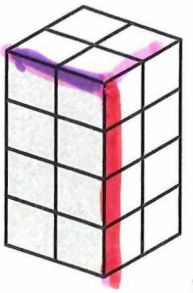


Figure III ✗

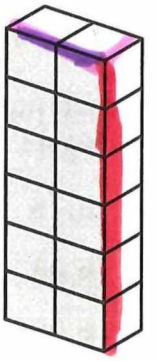


Figure IV ✓

Which figures have a volume of 12 cubic units?

$V = L \times w \times h$
$= 2 \times 2 \times 4$
$= 4 \times 4$
$= 16$

$V = L \times w \times h$
$= 2 \times 1 \times 6$
$= 2 \times 6$
$= 12$

F Figures II and IV only

G Figures I and III only

H Figures I, II, and IV only

J Figures I, II, III, and IV

72%

21 Kendra earned a total of $625 selling jewelry.

- She sold 7 necklaces for $55 each.
- She sold 8 rings.
- Each ring was sold for the same price.

5 12
625
−385
240

The equation shown can be used to find r, the amount of money in dollars she earned for each ring sold.

$$r = [625 - (7 \times 55)] \div 8$$

What was the amount of money in dollars Kendra earned for each ring sold?

$= [625 - 385] \div 8$
$= 240 \div 8$
$= \$30$

A $30

B $240

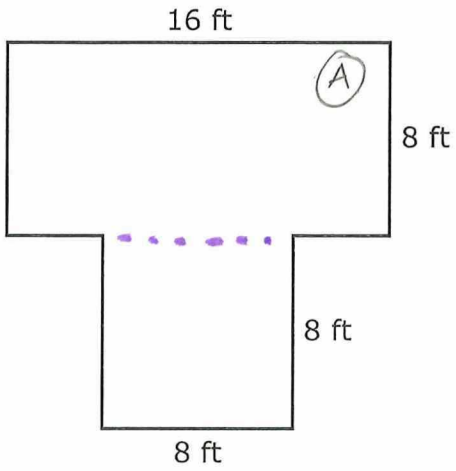
C $45

D None of these

GO ON

47%

22 Edgar built a deck in his backyard with a section in the shape of a rectangle and a section in the shape of a square. The model shows the dimensions of his deck in feet.



4
16
× 8
128 = Area of (A)

8
× 8
64 = Area of (B)

Total Area = (A) + (B)

What is the area in square feet of the deck Edgar built?

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

192 square feet

= 128 + 64
= 192 square feet.

GO ON

23 Jaylen was told to list all prime numbers between 30 and 50. Jaylen's list is shown.

59%

31, 37, 41, 47

Which prime number is missing from Jaylen's list?

A 49

B 39

C 43

D 33

49

1	49
2	X
3	X
4	X
5	X
6	X
7	7

39

1	39
2	X
3	13
4	X
5	X
6	X

33

1	33
2	X
⋮	
11	3

---

24 Gwen had a board that was 6.48 meters long. She cut the board into 9 pieces of equal length.

85%

What was the length of each piece in meters?

F 6.39 m

G 0.61 m

H 6.08 m

J 0.72 m

$6.48 \div 9 = 0.72$

$= 9\overline{)6.48}$

0.72

$-63\downarrow$

18

-18

0

D
M
S
B

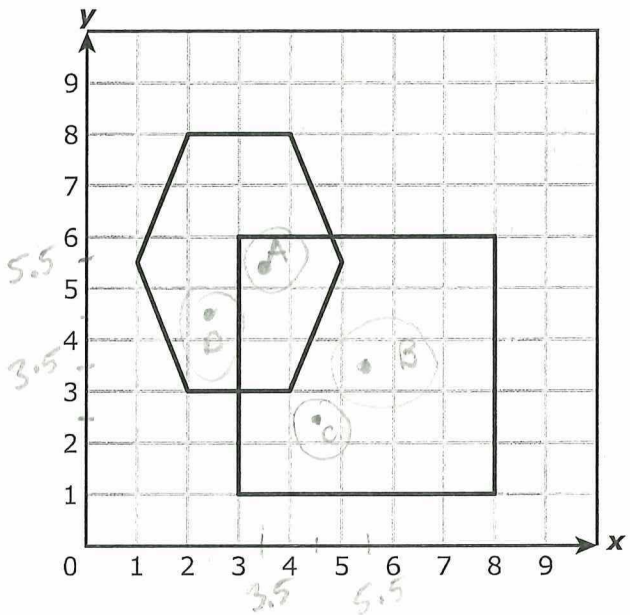
9, 18, 27

36, 45, 54

63, 72

GO ON

25 There are two shapes drawn on the coordinate grid, as shown.



Which ordered pair represents a point that is inside both shapes?

A (3.5, 5.5)

B (5.5, 3.5)

C (4.5, 2.5)

D (2.5, 4.5)

GO ON

4.8 times X

50%

26 Which table contains only x-values and y-values that make the equation $y = 4.8x$ true?

$y = 4.8 \times X$

F

x	y	
2	9.6	×4.8
4	19.2	×4.8
6	28.8	×4.8
8	38.4	×4.8

$y = 4.8 \times X$ or

H

x	y	
2	4.8	+2.8
4	9.6	+5.6
6	14.4	+8.4
8	19.2	+11.2

? not clear pattern

?

G

x	y	
3	7.8	+4.8
5	9.8	+4.8
7	11.8	+4.8
9	13.8	+4.8

$y = 4.8 + X$

J

x	y	
3	14.4	→ 3×4.8 = 14.4 ✓
5	19.2	→ 5×4.8 = 24 X
7	24.0	X
9	28.8	X

?

---

27 Spencer needs to balance his April budget.

81%

Spencer's April Budget

Income		Expenses	
Allowance	$40	Cell phone	$15
After-school job	$30	Piano lessons	$25
	$70	Entertainment	$30
		Savings	$10
			$80

What can he do so that his budget is balanced?

A Increase his savings this month by $10

B Increase his allowance by $5

C Decrease his piano lessons by $5

D Decrease his entertainment costs by $10

Income	Expenses
$70	$80
	− $10
$70	$70

So $10 balances the budget

same = balanced

GO ON

78%

28 Jonathan and Elizabeth are comparing the masses of their rocks.

- Jonathan's rock has a mass of 0.2 kilogram.
- Elizabeth's rock has a mass 8 times the mass of Jonathan's rock.

$$\begin{array}{r} 0.2 \\ \times \quad 8 \\ \hline 1.6 \end{array}$$

Same # of digits in the decimal place.

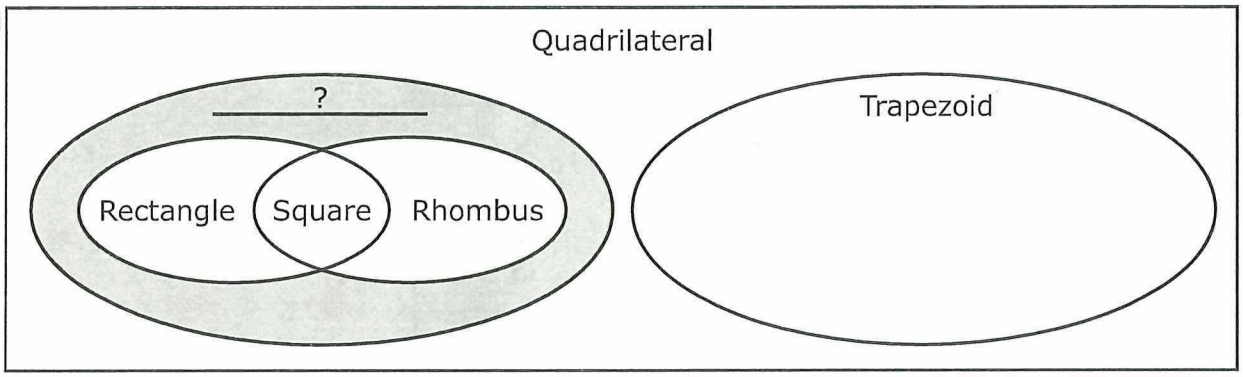
What is the mass of Elizabeth's rock in kilograms?

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

1.6 kg

82%

29 Quadrilaterals can be classified using the graphic organizer shown.



Which term best classifies the shapes that belong in the shaded section of the organizer?

A Parallelogram

B Polygon

C Pentagon

D None of these

Remember:

Quadrilateral — Four sides

Parallelogram — All sides parallel

Rectangle — All right angles

Square

Rhombus — All 4 sides same length

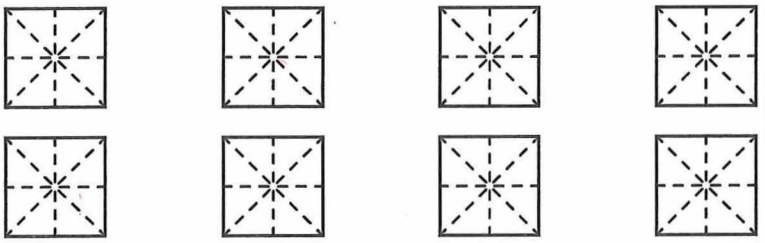
Trapezoid — only 2 sides parallel

GO ON

30 Which model represents the expression $4 \div \frac{1}{8}$?

87%

F

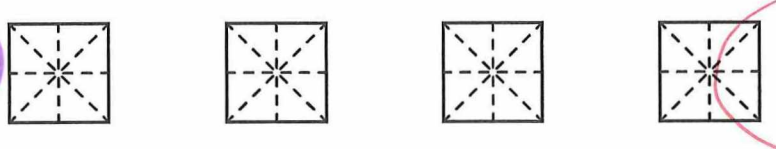


$8 \div \frac{1}{8} = 64$

G

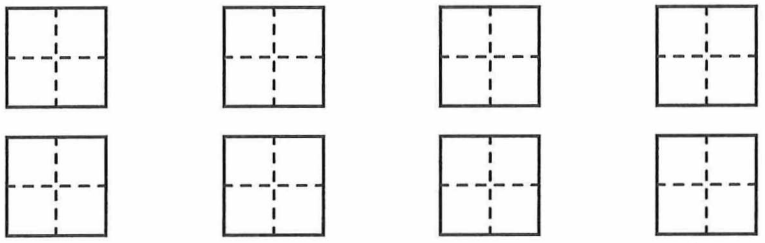
$4 \div \frac{1}{4} = 16$

H



$4 \div \frac{1}{8} = 32$

J



$8 \div \frac{1}{4} = 32$

GO ON

84%

31 Amelia made this list of her monthly expenses.

Expenses

Category	Amount (dollars)
Food	400
Rent	850
Savings	150
Other	

Expenses = 400. + 850. + 150. = 1,400

Amelia's net income for the month is $2,135. How much money does she have for other expenses?

A $3,535

B $1,400

C $885

D $735

Net income = $2,135

Existing expenses: −1,400

= $735 for other expenses

90%

32 Shane spent $15.45 on a shirt, $21.99 on a pair of pants, and $12.15 on a hat. Which is the best estimate for the amount of money in dollars Shane spent?

F $40

G $50

H $70

J $60

Estimate:

$15.45 → about $15

$21.99 → about $22

$12.15 → about $12

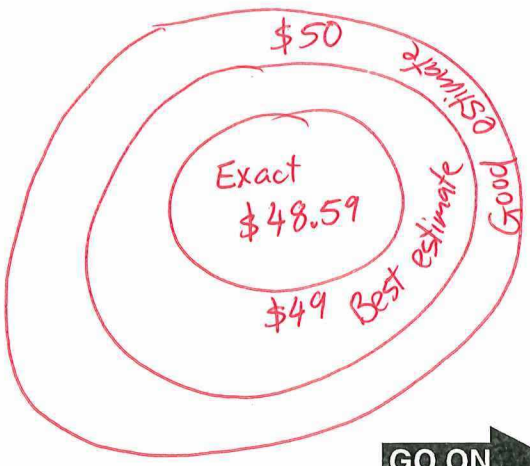
OR $15 + $20 + $10 = $45

Exact:

$15.45 + 21.99 + 12.15 = $48.59

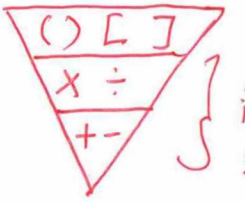
So:

$15 + 22 + 12 = $49



GO ON

Remember:



if two on same level, then do left first.

33 Which expression has a value of 25?

76%

A $2(32 + 18) \div 4$

B $(10 \times 10) \div (2 \div 2)$

C $(50 \times 10) \div 5$

D $(10 + 10) \div 4$

$2 \times (32+18) \div 4$

$= 2 \times 40 \div 4$

$= 80 \div 4 = 25$

Do X first

---

34 Harriett baked 3 cakes. She cut each cake into equal-size pieces. Each piece was $\frac{1}{9}$ of the cake.

97%

What was the total number of pieces after Harriett cut these cakes?

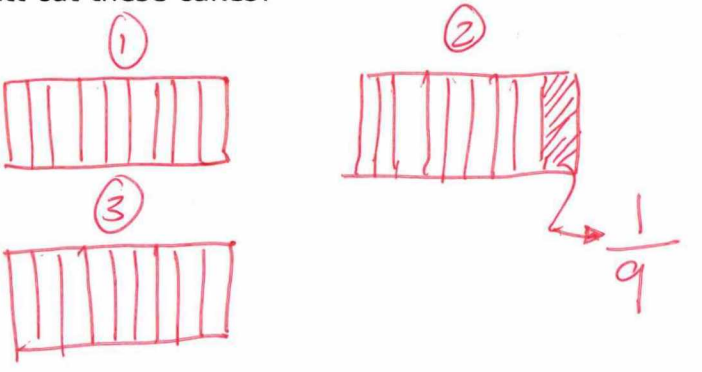
F 12

G 27

H 9

J 3

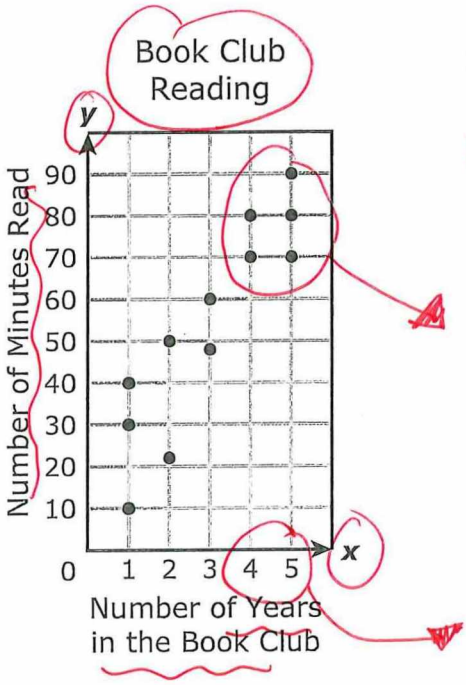
- 3 cakes:
- cut into $\frac{1}{9}$ pieces or 9 per cake



GO ON

87%

35 The scatterplot shows the number of minutes each student in a book club read during a week and the number of years the student has participated in the book club.



① First read title
② Read axis titles (the X and Y)

4 or 5 years

What is the total number of minutes read by the students who have participated in the book club for 4 or 5 years?

A 450

B 390

C 90

D 80

X	Y
4	70
4	80
5	70
5	80
5	90

Total:
70
80
70
80
+90
390

76%

36 Landon had one string that was 10 meters long. He used 6.275 meters of this string for a project.

What was the length of string in meters that Landon had left?

Remember zero!

$$\begin{array}{r} {}^{9}\,{}^{9}\,{}^{9}\,{}^{10} \\ \cancel{10}.000 \\ -\ 6.275 \\ \hline 3.725 \end{array}$$

① Stack with larger on top
② line up decimals
③ Subtract, with regrouping

F 16.275 m

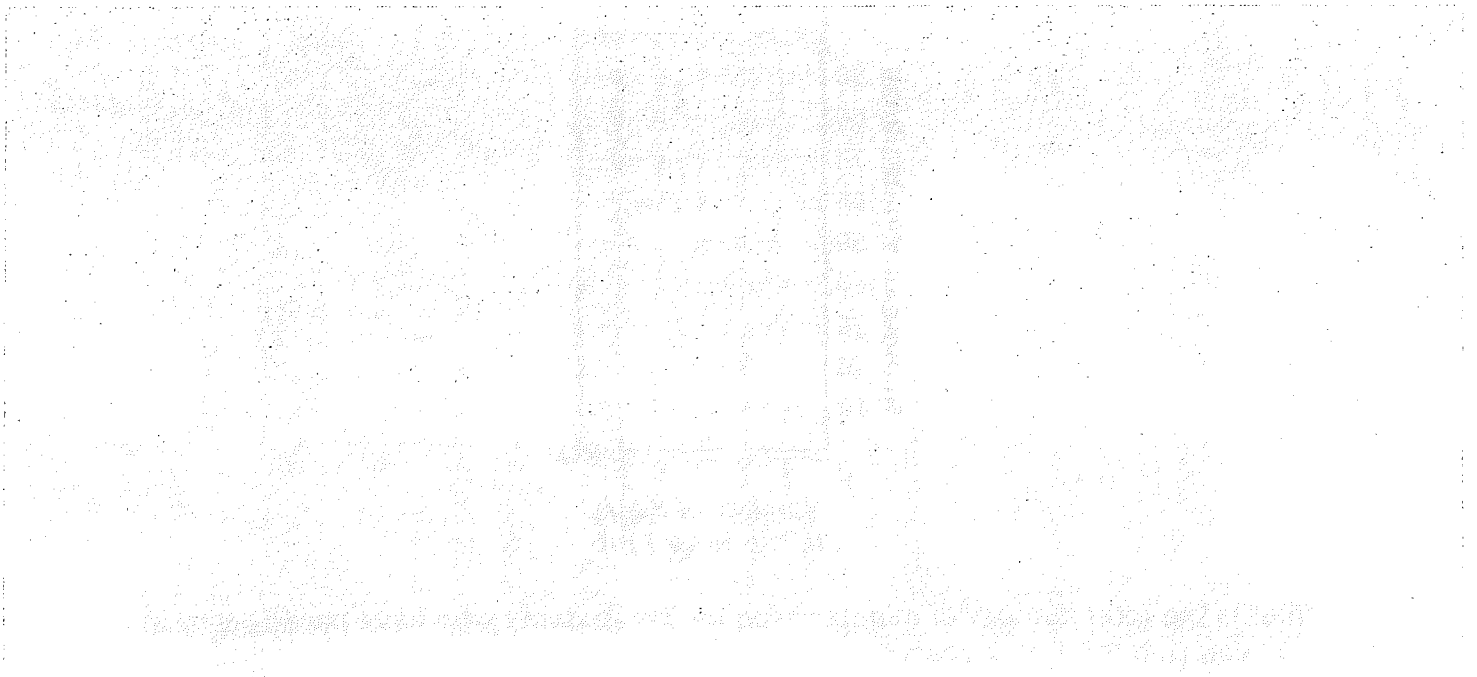
G 4.275 m

H 3.725 m

J 6.265 m

BE SURE YOU HAVE RECORDED ALL OF YOUR ANSWERS ON THE ANSWER DOCUMENT.

STOP



STAAR
GRADE 5
Mathematics
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