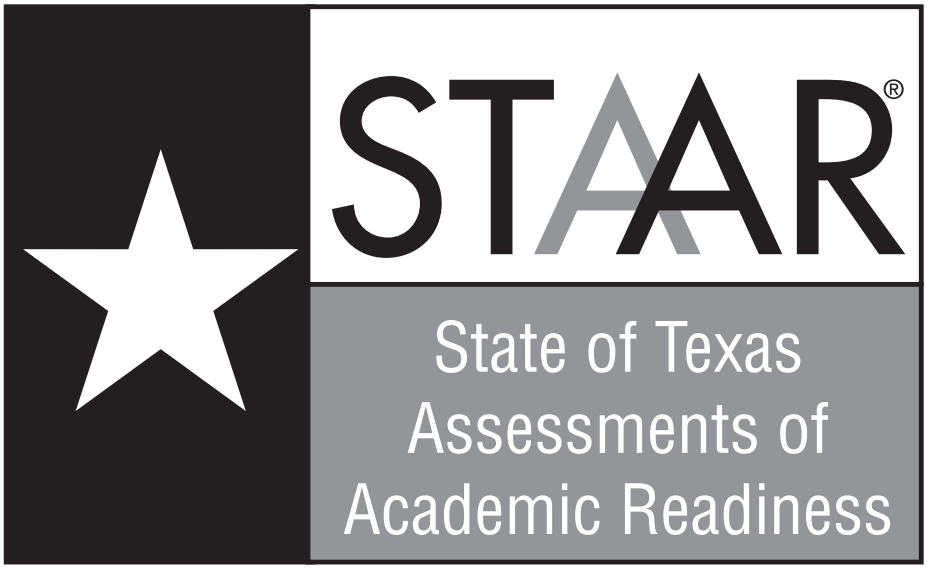



# GRADE 3

## Mathematics

## Administered April 2013

# RELEASED

# STAAR GRADE 3 MATHEMATICS REFERENCE MATERIALS

## LENGTH

| Customary | Metric |
|---|---|
| 1 yard (yd) = 3 feet (ft) | 1 meter (m) = 100 centimeters (cm) |
| 1 foot (ft) = 12 inches (in.) | 1 centimeter (cm) = 10 millimeters (mm) |

## TIME

1 year = 12 months

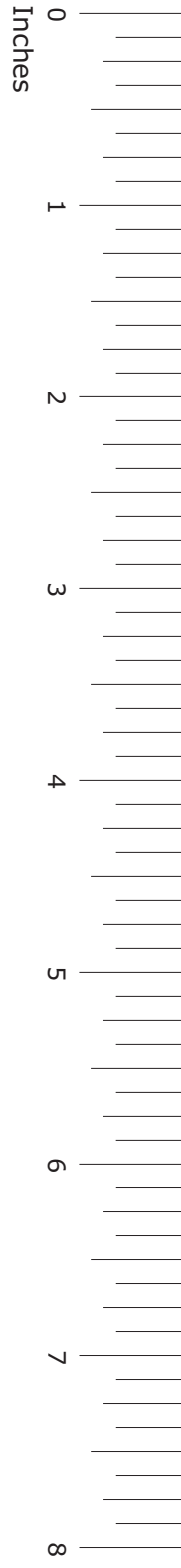
1 year = 52 weeks

1 week = 7 days

1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds



# STAAR GRADE 3 MATHEMATICS REFERENCE MATERIALS

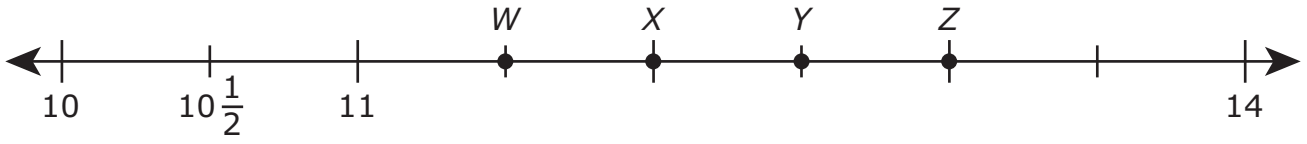

This page shows only the metric ruler.

# MATHEMATICS

**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.**

**1** Which point best represents 13 on the number line below?




**A** Point *W*

**B** Point *X*

**C** Point *Y*

**D** Point *Z*

---

**2** Belinda made 5 gallons of fruit punch for a party. There are 8 pints in each gallon of punch. Which expression is in the same fact family as $8 \times 5 = 40$?

**F** $5 \times 40$

**G** $8 + 5$

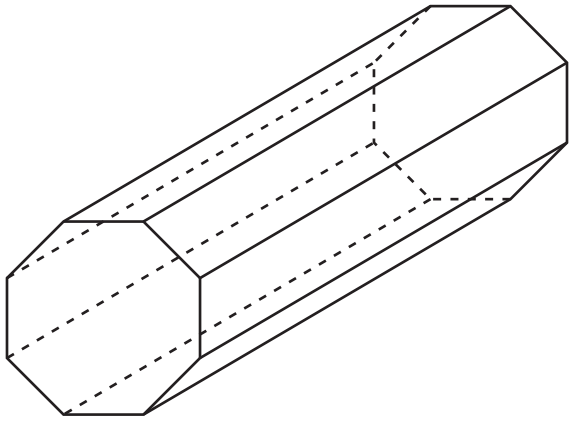
**H** $40 \div 8$

**J** $40 - 8$



GO ON

**3** A three-dimensional figure is shown below.



How many vertices does this figure have?

**A** 10

**B** 16

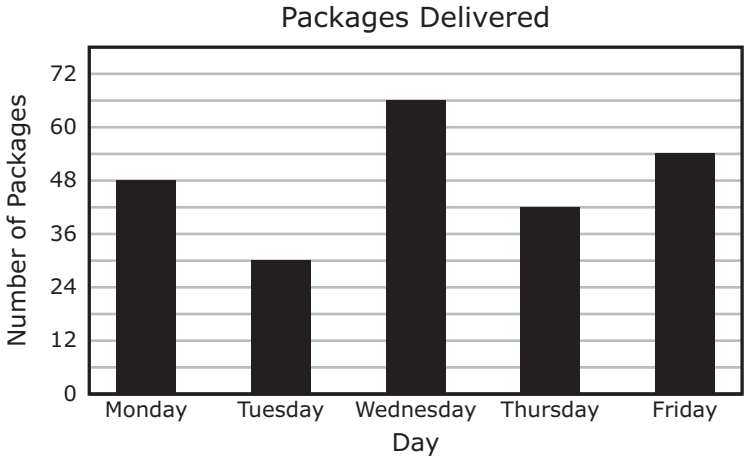
**C** 24

**D** 8



GO ON

**4** The graph below shows the number of packages Blanca delivered on five days.




Which table best represents the information in the graph?

**F**

Packages Delivered

| Day | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| Number of Packages | 48 | 30 | 66 | 54 | 42 |

**G**

Packages Delivered

| Day | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| Number of Packages | 48 | 36 | 72 | 48 | 60 |

**H**

Packages Delivered

| Day | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| Number of Packages | 48 | 30 | 66 | 42 | 54 |

**J**

Packages Delivered

| Day | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| Number of Packages | 48 | 30 | 42 | 66 | 54 |



GO ON

**5** Andy has trumpet practice 4 times every month. Each practice lasts 2 hours. What is the total number of hours that Andy will practice in 9 months?

**A** 72

**B** 156

**C** 36

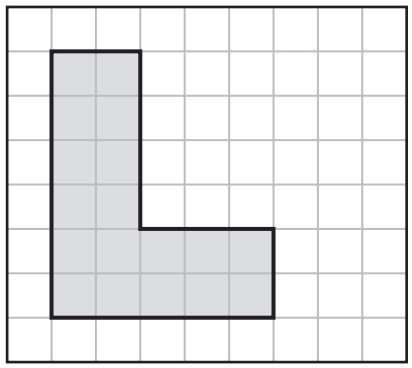
**D** 104



GO ON

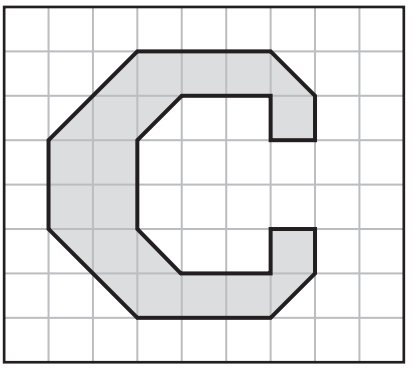
**6** Which of the following shaded letters does **NOT** have an area of 18 square units?

**F**



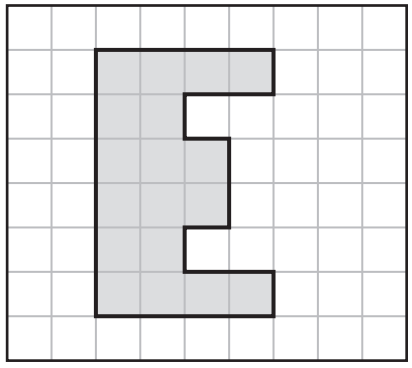
☐ = 1 square unit

**H**



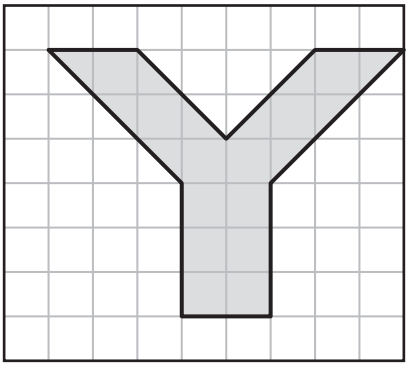
☐ = 1 square unit

**G**



☐ = 1 square unit

**J**

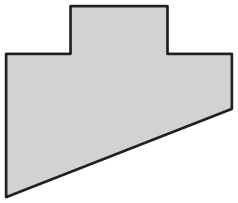


☐ = 1 square unit



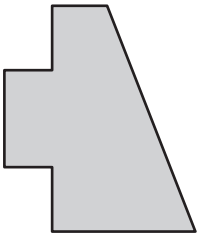
GO ON

**7** Sarah drew and shaded the figure shown below.

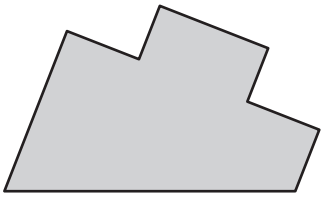


Which figure appears to be congruent to the one Sarah drew?

**A**

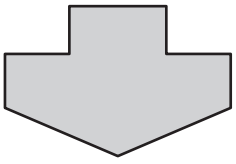


**B**



**C**

**D**





GO ON

**8** Georgia made cupcakes for a bake sale. The table below shows the total number of cupcakes in different numbers of pans.

Cupcakes

| Number of Pans | Total Number of Cupcakes |
|---|---|
| 4 | 24 |
| 6 | 36 |
| 11 | 66 |
| 13 | |
| 20 | 120 |

There is the same number of cupcakes in each pan. What is one way to find the total number of cupcakes in 13 pans?

**F** Find the sum of 66 and 36

**G** Find the difference between 120 and 13

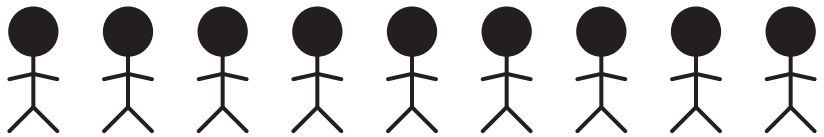
**H** Find the product of 13 and 6

**J** Find the difference between 120 and 66



GO ON

**9** Emery drew 3 rows of stick figures. Each row has the same number of stick figures. One of the rows is shown below.



How many stick figures are in 3 rows?

**A** 12

**B** 24

**C** 9

**D** Not here



GO ON

**10** A store has different flavors of jelly in jars. The table below shows the number of jars of each flavor of jelly.

Jars of Jelly

| Flavor | Number of Jars |
|---|---|
| Grape | 17 |
| Apple | 8 |
| Strawberry | 14 |
| Peach | 11 |
| Orange | 6 |
| Blackberry | 8 |

If 1 jar is chosen at random, which two flavors of jelly have an equal chance of being chosen?

**F** Strawberry and peach

**G** Apple and blackberry

**H** Orange and blackberry

**J** Grape and strawberry

---

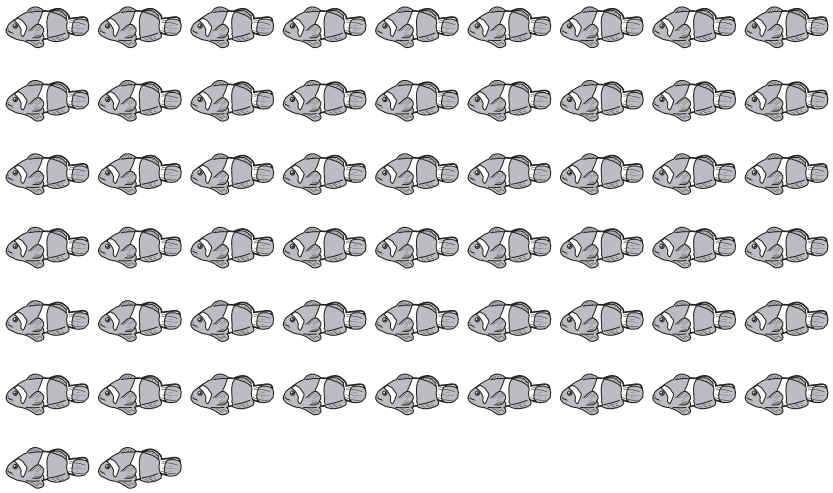
**11** Gilbert had a total of 85 CDs to put in stacks. He put 27 CDs in one stack and 39 CDs in a second stack. How many CDs did Gilbert have left to put in stacks?

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



GO ON

**12** The picture below shows the number of fish Mrs. Gonzales wants to put into fish tanks.



She will put 7 fish into each tank. Which number sentence shows the number of fish tanks Mrs. Gonzales needs for her fish?

**F** $56 \div 7 = 9$

**G** $56 \div 7 = 8$

**H** $56 \div 7 = 6$

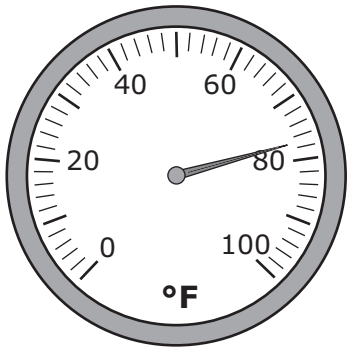
**J** $56 \div 7 = 7$



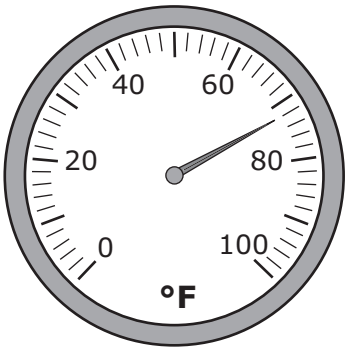
GO ON

**13** The outside temperature on a summer morning was between 75°F and 80°F. Which thermometer shows a temperature between 75°F and 80°F?

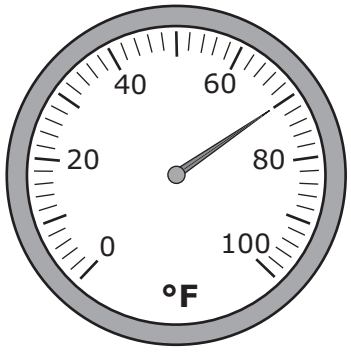
**A**



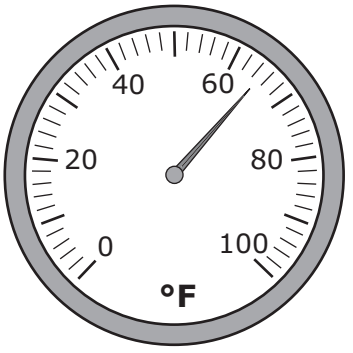

**C**




**B**



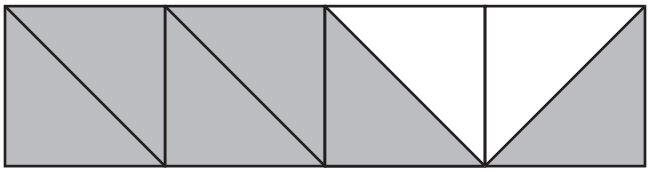

**D**






GO ON

**14** Indira shaded part of a figure, as shown below.



What fraction of the figure is shaded?

**F** $\frac{2}{6}$

**G** $\frac{2}{8}$

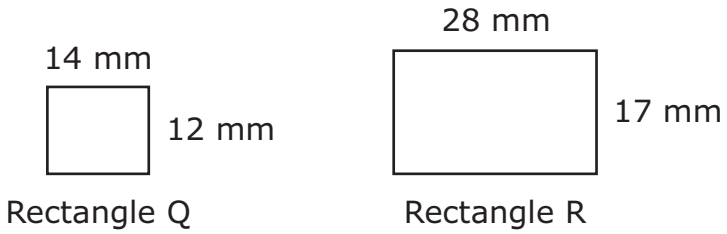
**H** $\frac{6}{8}$

**J** $\frac{1}{6}$



GO ON

**15** The dimensions of two rectangles are shown below.




Rectangle Q Rectangle R

Which statement about these rectangles is true?

**A** The perimeter of Rectangle Q is 19 millimeters less than the perimeter of Rectangle R.

**B** The perimeter of Rectangle Q is 38 millimeters less than the perimeter of Rectangle R.

**C** The perimeter of Rectangle Q is 14 millimeters less than the perimeter of Rectangle R.

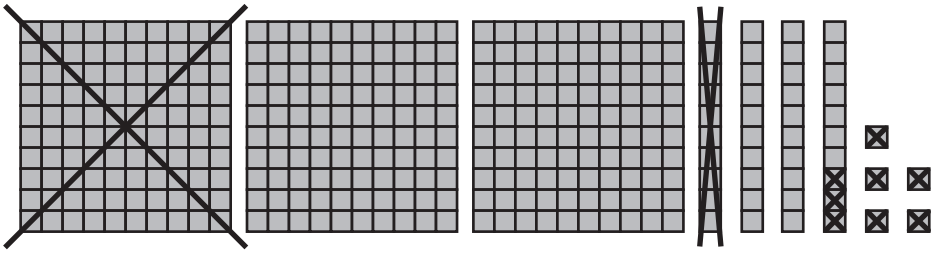
**D** The perimeter of Rectangle Q is 42 millimeters less than the perimeter of Rectangle R.



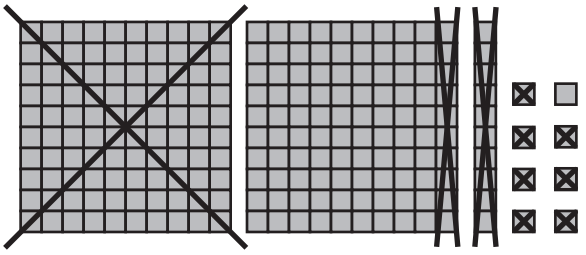
GO ON

**16** Rob had 345 concert tickets to sell. He sold 127 of these tickets on Monday. Which model represents the number of tickets Rob had left to sell?

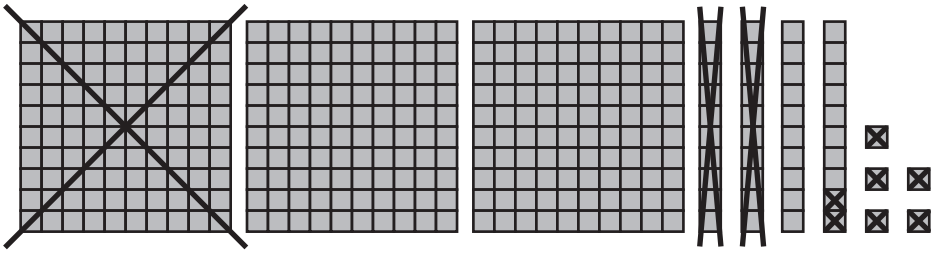
**F**



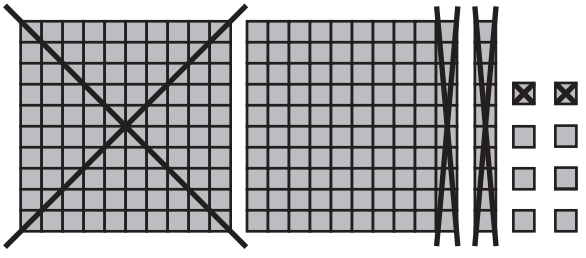
**G**



**H**



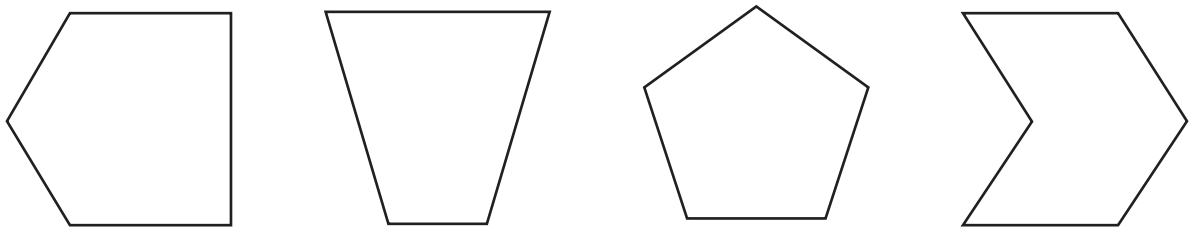
**J**





GO ON

**17** Ava drew the figures below on her paper.



Which statement about these figures is true?

**A** They are all hexagons.

**B** They are all pentagons.

**C** They are all quadrilaterals.

**D** They are all polygons.



GO ON

**18** Mr. Neufeld grew a vegetable garden last year. The list below shows the number of three vegetables he grew.

- 718 onions
- 374 potatoes
- 187 cucumbers

Which expression shows the best way to estimate the difference between the number of potatoes and the number of cucumbers Mr. Neufeld grew in his garden?

**F** $370 + 190$

**G** $400 + 100$

**H** $400 - 100$

**J** $370 - 190$



GO ON

**19** The numbers below form a pattern.

3, 16, 29, 42, 55, . . .

Which of these numbers would **NOT** be part of this pattern?

**A** 68

**B** 81

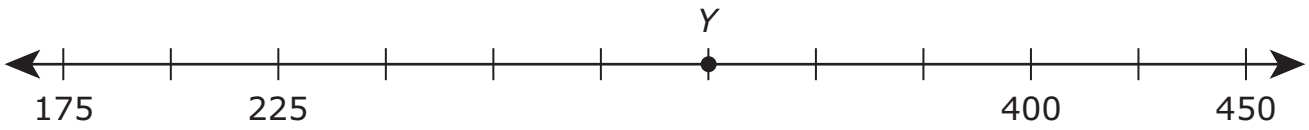
**C** 71

**D** 94



GO ON

**20** What number does point *Y* best represent on the number line below?




**F** 350

**G** 300

**H** 275

**J** 325



GO ON

**21** The table below shows the number of games won by four people during a sporting event.

Games Won

| Name | Number of Games Won |
|---|---|
| Yolanda | 48 |
| William | 32 |
| Barbara | 36 |
| Javier | 60 |

The pictograph below represents the same information.

Games Won

| | |
|---|---|
| Yolanda |  |
| William |  |
| Barbara |  |
| Javier |  |

Which key completes the pictograph?

**A** Each  means 8 games won.

**B** Each  means 2 games won.

**C** Each  means 6 games won.

**D** Each  means 4 games won.



GO ON

**22** The number of people living in a city has a 3 in the hundreds place and a 1 in the ten-thousands place. Which number has a 3 in the hundreds place and a 1 in the ten-thousands place?

**F** 318,297

**G** 791,326

**H** 219,305

**J** 536,812



GO ON

**23** The table below shows the total number of postcards in different numbers of packages.

Postcards

| Number of Packages | Total Number of Postcards |
|---|---|
| 2 | 24 |
| 6 | 72 |
| 8 | |
| 10 | 120 |
| 12 | 144 |

Each package has the same number of postcards. What is the total number of postcards in 8 of these packages?

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

---

**24** A company received 492 phone calls from customers in June and 267 phone calls from customers in July. What is the difference between the numbers of phone calls received in these two months?

**F** 225

**G** 759

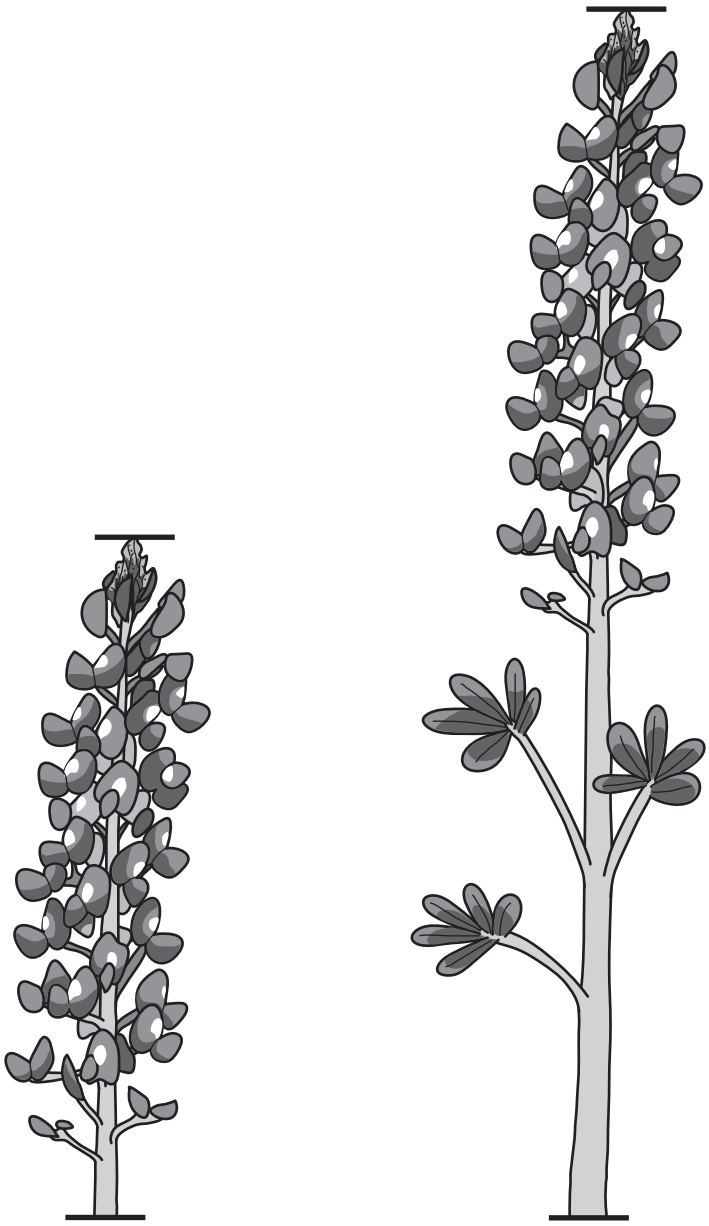
**H** 235

**J** 135



GO ON

**25** Haley saw two bluebonnets like the ones shown below. Use the ruler provided to measure the height of each bluebonnet to the nearest centimeter.



What is the difference between the heights of these two bluebonnets?

**A** 13 cm

**B** 7 cm

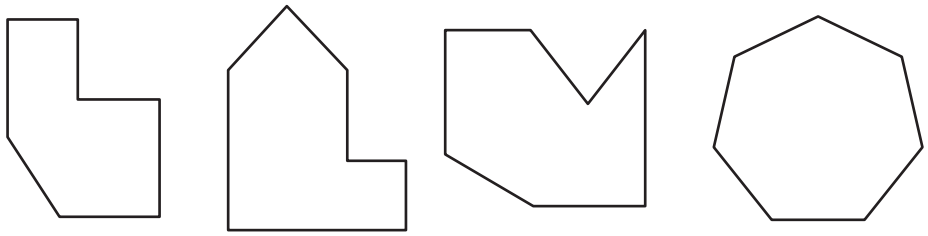
**C** 25 cm

**D** 16 cm

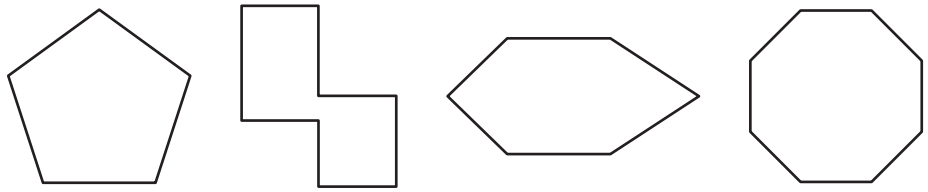


GO ON

**26** Naomi drew these figures and called them *serzas*.

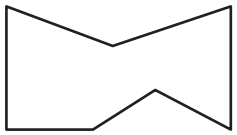


These are not *serzas*.

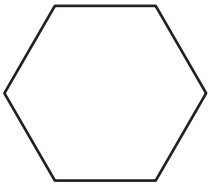


Which figure is a *serza*?

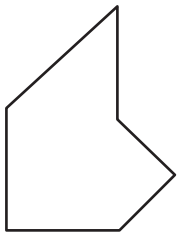
**F**



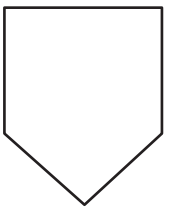
**H**



**G**



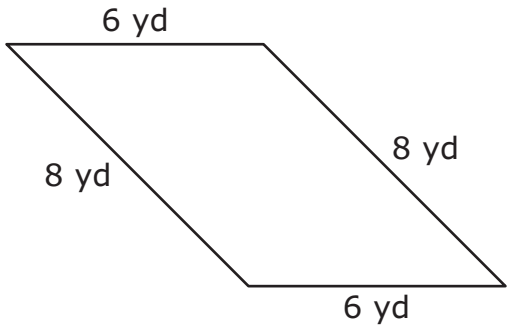
**J**





GO ON

**27** The side lengths of Terry's sandbox are shown below.




Terry buys 30 yards of fence. Does he have enough fence to go completely around his sandbox?

**A** No, because $8 \times 4 = 32$ and $32 > 30$

**B** Yes, because $8 + 6 = 14$ and $14 < 30$

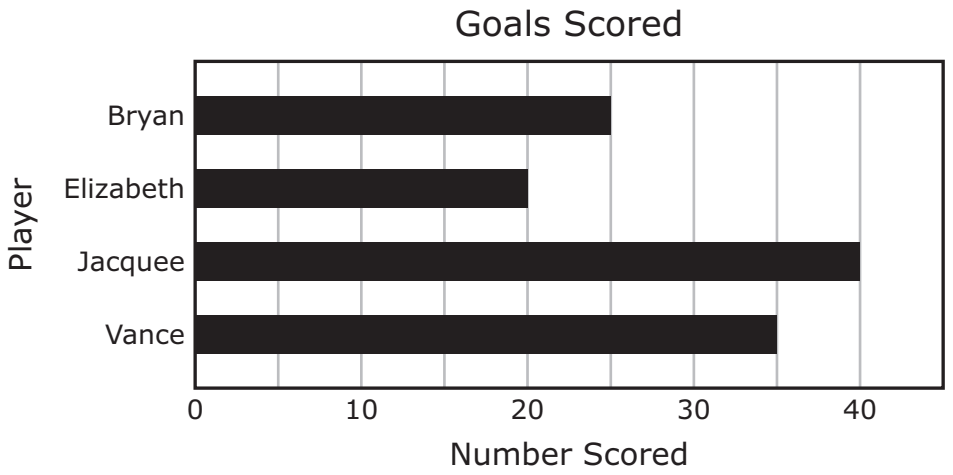
**C** No, because $8 \times 6 = 48$ and $48 > 30$

**D** Yes, because $8 + 6 + 8 + 6 = 28$ and $28 < 30$



GO ON

**28** The graph below shows the number of goals four players scored during a soccer season.




Based on the graph, what is the difference between the number of goals Vance scored and the number of goals Elizabeth scored?

**F** 15

**G** 3

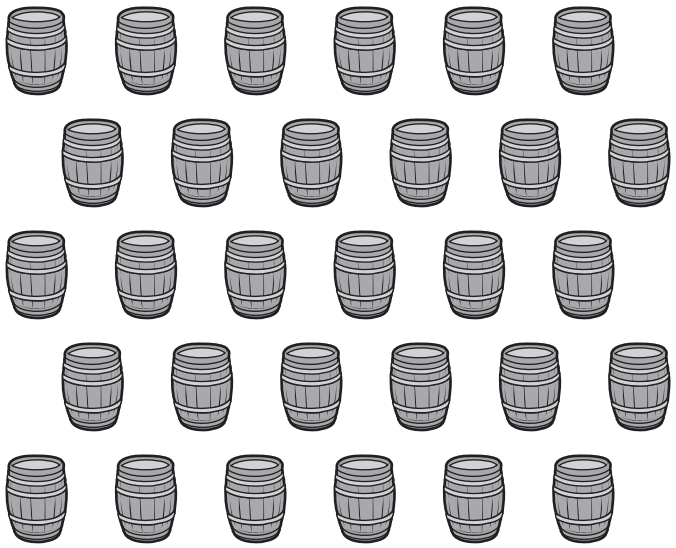
**H** 20

**J** 10



GO ON

**29** The barrels shown below will be placed in 3 rows at a park. There will be an equal number of barrels in each row.



Which number sentence shows the number of barrels that will be in each row?

**A** $30 \div 6 = 5$

**B** $36 \div 3 = 12$

**C** $30 \div 3 = 10$

**D** $36 \div 6 = 6$



GO ON

**30** Each meal at a restaurant costs $9. Which table shows the total cost for different numbers of meals?

**F**

Meals

| Number of Meals | 7 | 8 | 11 | 15 |
|---|---|---|---|---|
| Total Cost | $63 | $72 | $99 | $135 |

**G**

Meals

| Number of Meals | 7 | 8 | 11 | 15 |
|---|---|---|---|---|
| Total Cost | $16 | $17 | $20 | $24 |

**H**

Meals

| Number of Meals | 7 | 8 | 11 | 15 |
|---|---|---|---|---|
| Total Cost | $63 | $72 | $81 | $90 |

**J**

Meals

| Number of Meals | 7 | 8 | 11 | 15 |
|---|---|---|---|---|
| Total Cost | $9 | $18 | $27 | $36 |



GO ON

**31** Pam has 18 gold medals, 12 silver medals, and 9 bronze medals in a box. She will choose 1 of these medals at random. Which statement about Pam's choice is true?

**A** It is certain that Pam will choose a gold medal.

**B** Pam is less likely to choose a bronze medal than a silver medal.

**C** Pam is more likely to choose a silver medal than a gold medal.

**D** It is impossible for Pam to choose a bronze medal.

---

**32** Willis has 5 bags of marbles that have 18 marbles each. He also has 3 bags of marbles that have 13 marbles each. What is the total number of marbles in these 8 bags?

**F** 194

**G** 47

**H** 129

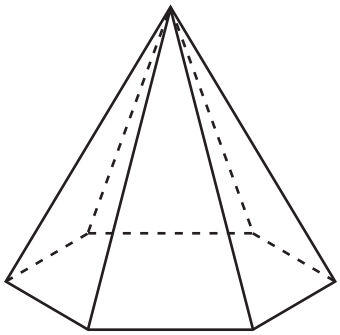
**J** 90



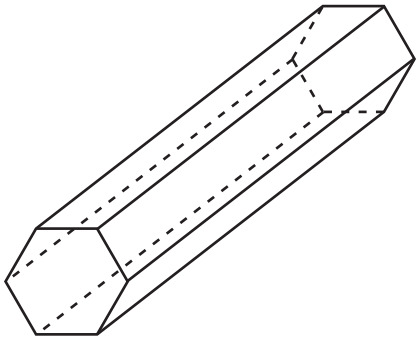
GO ON

**33** Which figure has exactly 12 edges?

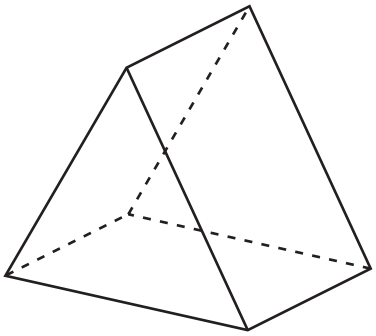
**A**



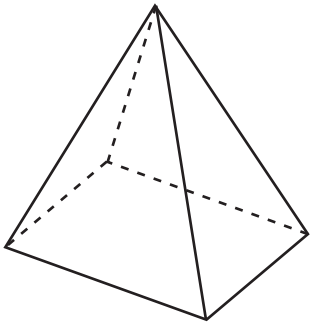
**B**



**C**



**D**





GO ON

**34** The table below shows the total number of granola bars in different numbers of boxes.

Granola Bars

| Number of Boxes | 2 | 4 | 8 | 9 |
|---|---|---|---|---|
| Total Number of Granola Bars | 32 | | 128 | 144 |

Each box has the same number of granola bars. What is the total number of granola bars in 4 boxes?

**F** 124, because $128 - 4 = 124$

**G** 48, because $16 \times 3 = 48$

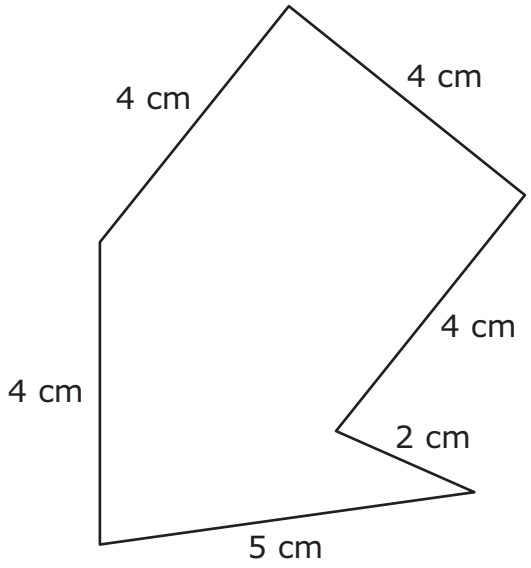
**H** 96, because $128 - 32 = 96$

**J** 64, because $16 \times 4 = 64$



GO ON

**35** The side lengths of a figure are shown below.




What is the perimeter of the figure in centimeters?

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



GO ON

**36** Vandra sold the following number of lightbulbs during three months at a store.

- She sold 573 lightbulbs in January.
- She sold 822 lightbulbs in February.
- She sold 738 lightbulbs in March.

How many lightbulbs did Vandra sell during these three months?

**F** 2,023

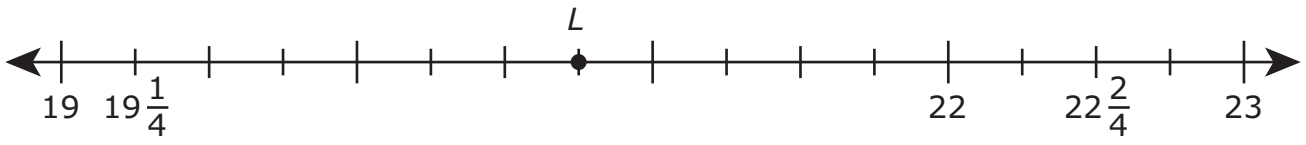
**G** 2,133

**H** 2,223

**J** 2,033

---

**37** What number does point *L* best represent on the number line below?




**A** 21

**B** $21\frac{2}{4}$

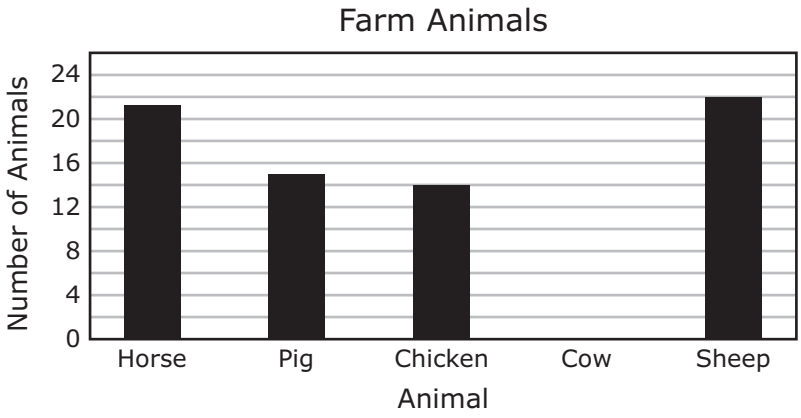
**C** $20\frac{3}{4}$

**D** $20\frac{2}{4}$



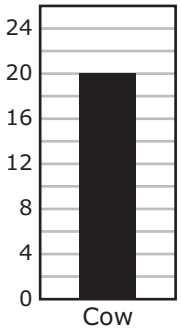
GO ON

**38** The graph below shows the number of each kind of animal on a farm. The bar for the number of cows on the farm is missing.

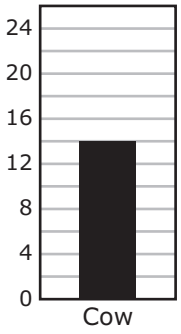



There is a total of 82 animals on the farm. Which bar completes the graph?

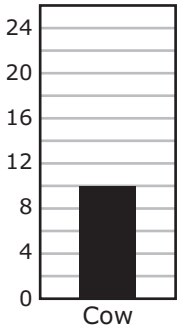
**F**



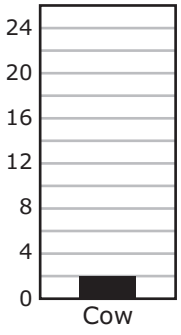

**H**




**G**



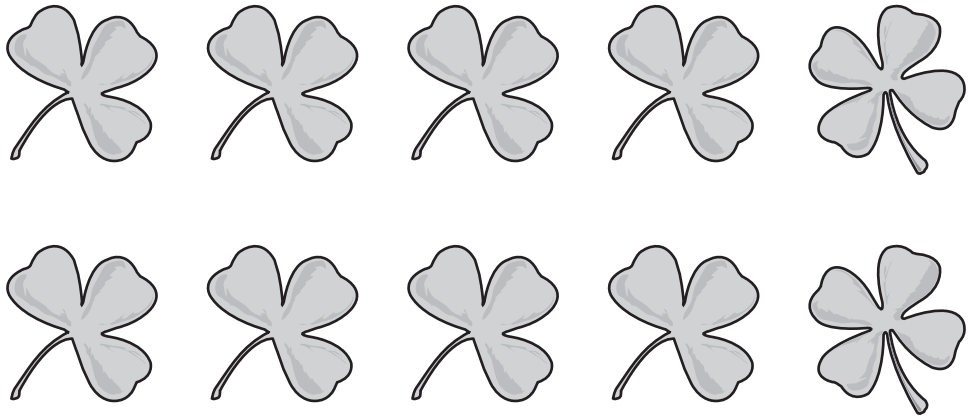

**J**






GO ON

**39** Rochelle has clovers with different numbers of leaves, as shown below.



What part of this group of clovers has exactly three leaves?

**A** 2 out of 10

**B** 1 out of 8

**C** 2 out of 8

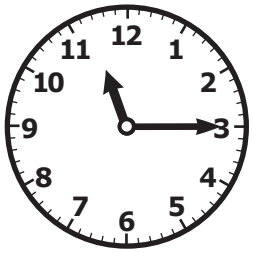
**D** 8 out of 10



GO ON

**40** The clocks below show the times that Reid started and finished computer class one morning.

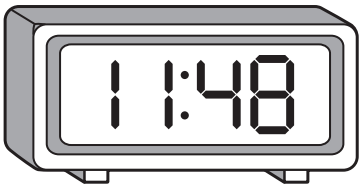

Start



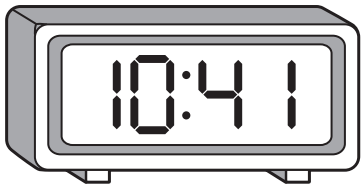

Finish

Which digital clock shows a time when Reid was in computer class?

**F**

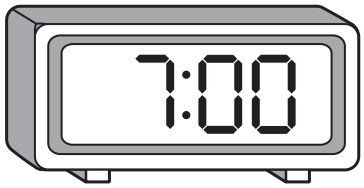



**H**




**G**


**J**






GO ON

**41** Carl arranged 9 rows of bricks to make a walkway. Each row had 56 bricks. How many bricks did Carl arrange in this walkway?

**A** 504

**B** 495

**C** 904

**D** 454

---

**42** Ian has a paintbrush that is $5\frac{1}{2}$ inches long. Use the ruler provided to measure the length of the line segment below each paintbrush to the nearest $\frac{1}{2}$ inch. Which paintbrush is closest to $5\frac{1}{2}$ inches?

**F**

**G**

**H**

**J**



GO ON

**43** Janie collected 10 sea stars at the beach. Each sea star had 5 arms, as shown below.

Which expression can be used to find the total number of arms on 10 sea stars?

**A** $10 \div 5$

**B** $10 - 5$

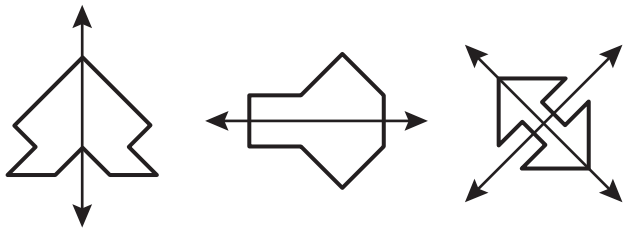
**C** $10 + 5$

**D** $10 \times 5$

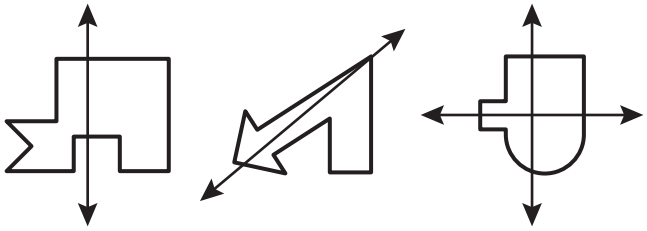


GO ON

**44** The figures below all have a common characteristic.

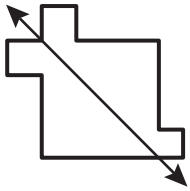


These figures do not have the common characteristic.

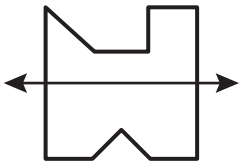


Which figure also has the common characteristic?

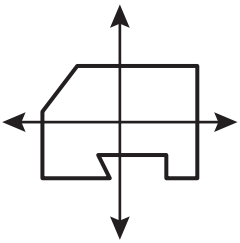
**F**



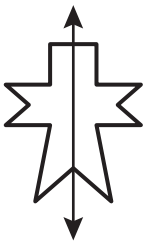
**H**



**G**



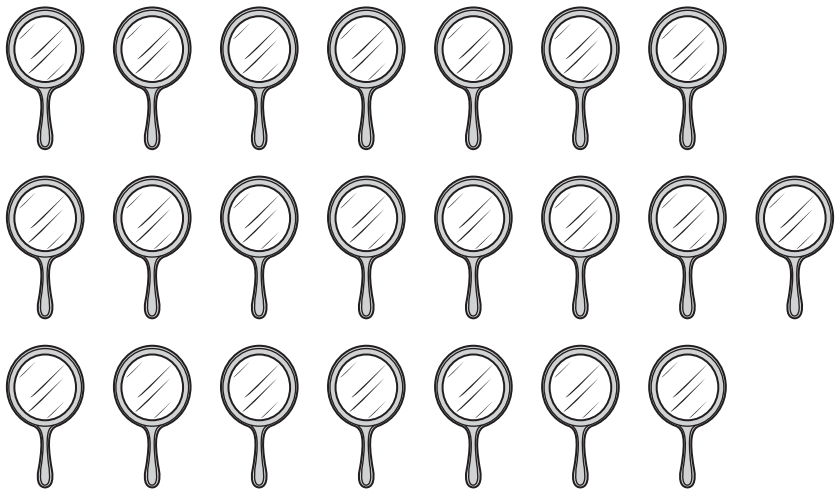
**J**





GO ON

**45** Nelli will arrange 22 mirrors on 2 shelves in a store. There will be an equal number of mirrors on each of the shelves.



How many mirrors will be on each of the shelves?

**A** 11, because $22 \div 2 = 11$

**B** 24, because $22 + 2 = 24$

**C** 44, because $22 \times 2 = 44$

**D** 20, because $22 - 2 = 20$



GO ON

**46** The table below shows the total number of rulers in different numbers of boxes.

Rulers

| Number of Boxes | 1 | 3 | 5 | 9 |
|---|---|---|---|---|
| Total Number of Rulers | 12 | 36 | | 108 |

There is an equal number of rulers in each box. Which number sentence shows how to find the total number of rulers in 5 boxes?

**F** $5 + 36 = 41$

**G** $5 \times 9 = 45$

**H** $5 + 24 = 29$

**J** $5 \times 12 = 60$

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

# STAAR
# GRADE 3
# Mathematics
# April 2013

545583 1 2 3 4 5 A B C D E Printed in the USA ISD4717