

Name _____

Minnesota Comprehensive Assessments-Modified

Mathematics Item Sampler
Grade 7

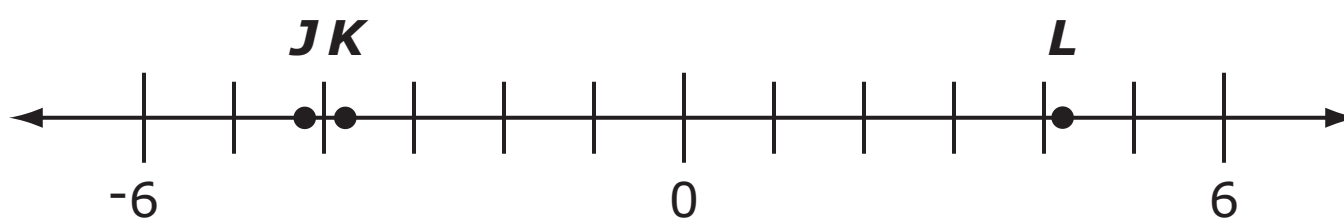


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Mathematics Test — Segment 1

1. Which letter represents -4.1 on the number line?



- A. Point *J*
 B. Point *K*
 C. Point *L*

2. The table shows the percentage of students from different grades in a gym class.

Students in a Gym Class

6th Graders	7th Graders	8th Graders
30%	50%	?

What fraction of the students are 8th graders?

- A. $\frac{1}{20}$
 B. $\frac{1}{5}$
 C. $\frac{4}{5}$



3. Simplify.

$$5^2 + 3^3$$

- A. 19
 - B. 34
 - C. 52
-

4. Siris can plant 8 trees in 2 hours.

How many trees can he plant in 8 hours?

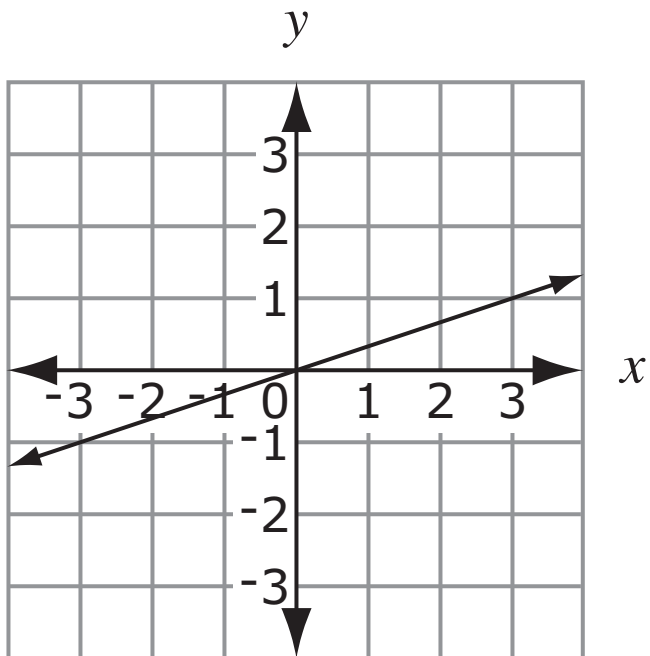
- A. 16
- B. 32
- C. 64



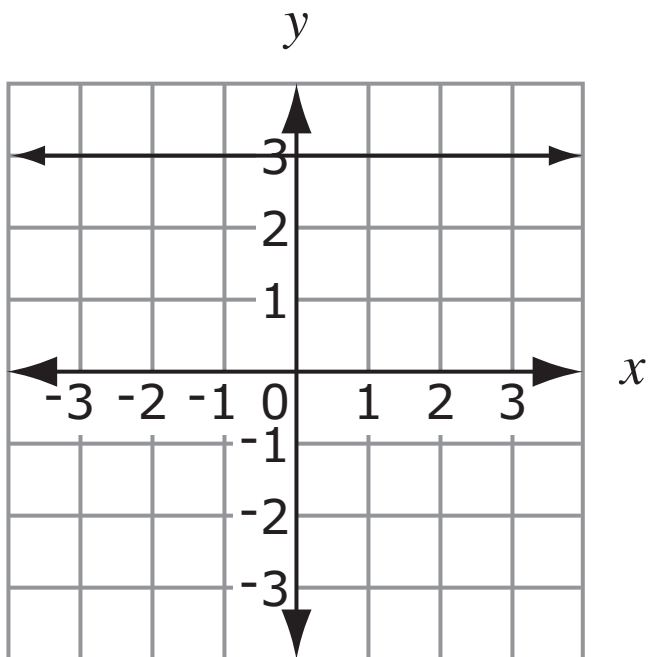
Mathematics Test — Segment 2

5. Which graph represents the equation $y = 3x$?

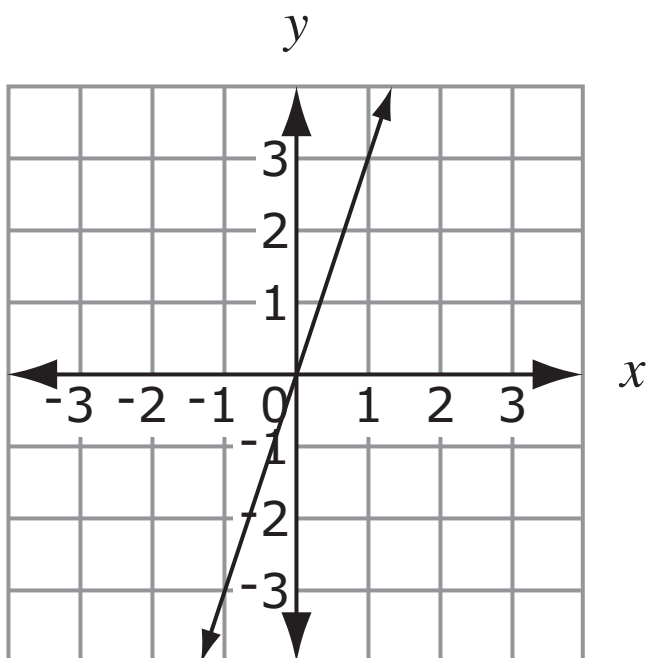
A.



B.



C.



2

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6. Jamie is selling cookies. She made a chart to show the cost of the cookies based on the number of boxes purchased.

Cookie Costs

Number of Boxes	1	3	5	7	9
Cost	\$1.50	\$4.50	\$7.50	\$10.50	\$13.50

What is the cost for **12 boxes** of cookies?

- A. \$16.50
- B. \$18.00
- C. \$21.00

2

-
7. Simplify.

$$10 - 3(p + 2)$$

- A. $3p + 4$
- B. $-3p + 16$
- C. $-3p + 4$



8. The equation shown can be used to find the height of a tree based on the number of months of growth.

$$h = 10m + 50$$

h = height in centimeters
 m = number of months
of growth

The tree has been growing for 4 months. What is h , the height of the tree?

- A. 64 centimeters
B. 90 centimeters
C. 240 centimeters

2

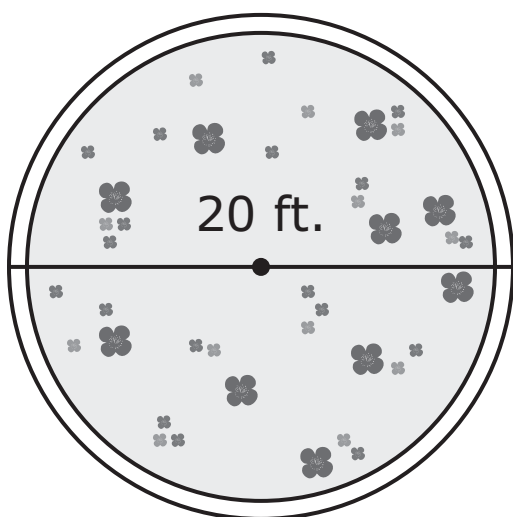
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9. Alex has a circular flower garden.

The diameter of the garden is 20 feet.



Circumference of a Circle

$$C = 2\pi r$$

C = circumference

r = radius

(Use 3.14 for π .)

What is the **circumference** of the flower garden?

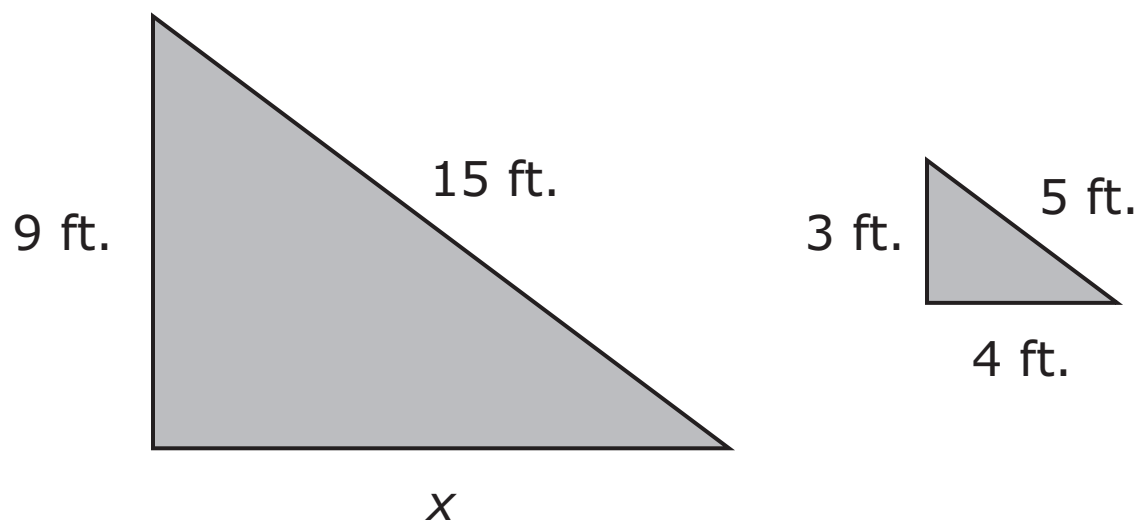
- A. 62.8 feet
- B. 125.6 feet
- C. 314 feet

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- 10.** The triangles shown are similar.



What is the value of x ?

- A.** 8 ft
- B.** 12 ft
- C.** 14 ft

-
- 11.** A map uses the scale $1.5 \text{ cm} = 30 \text{ miles}$.

The cities of Pineview and Oakwood are 90 miles apart.

How far apart are Pineview and Oakwood **on the map**?

- A.** 3.15 cm
- B.** 4.5 cm
- C.** 31.5 cm



12. Lin has 5 uncles. Their ages are shown.

34 36 36 39 40

Which measure of this data is the **greatest**?

- A.** Mean
- B.** Median
- C.** Range



13. Which graph represents the data in the table?

Family Ages

Age (years)	Number of People
1-12	14
13-40	28
41-80	14

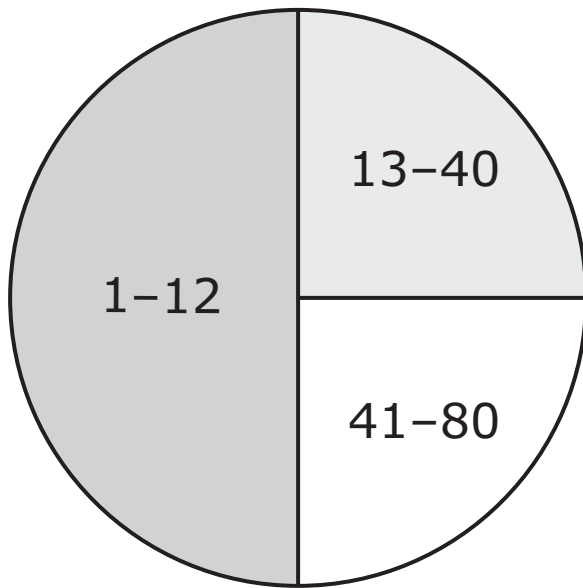
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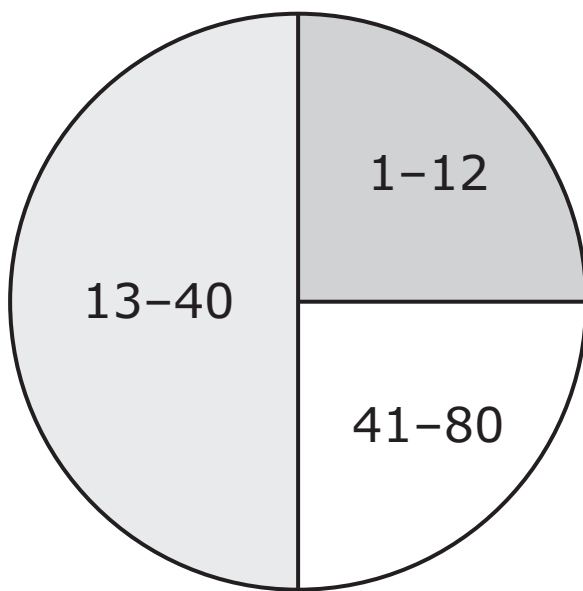
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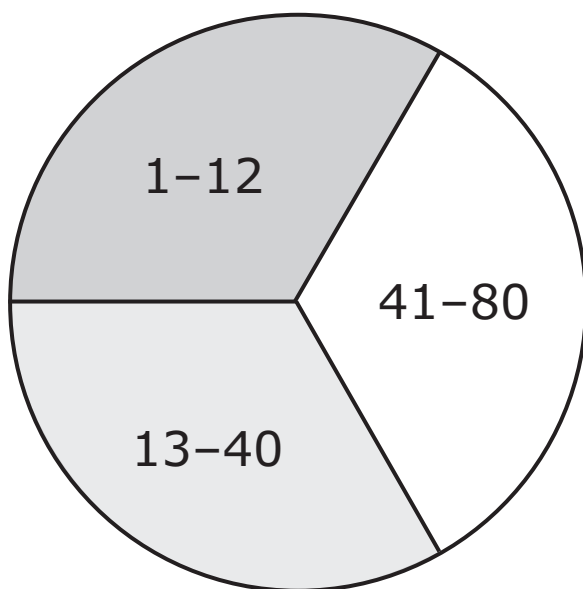
A. Family Ages



B. Family Ages



C. Family Ages



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- 14.** It is Michael's turn to choose the class activity for gym on Friday.

The teacher puts slips of paper in a jar, as shown in the table, and Michael chooses one slip of paper without looking.

Gym Activity Choices

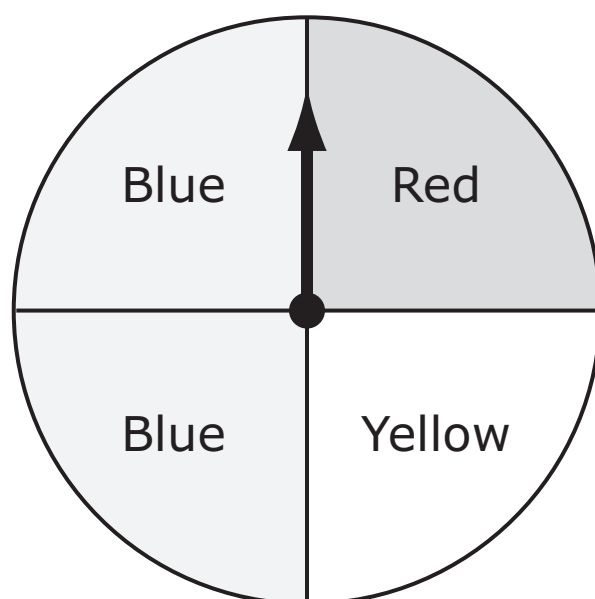
Gym Activity	Number of Slips of Paper
Floor hockey	4
Basketball	5
Archery	4
Volleyball	7

What is the probability that Michael will choose volleyball?

- A.** $\frac{1}{7}$
- B.** $\frac{7}{13}$
- C.** $\frac{7}{20}$



15. A spinner is shown.



The arrow on the spinner is spun 50 times.

How many times is the arrow likely to land on a blue section?

- A.** 12
- B.** 25
- C.** 50

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