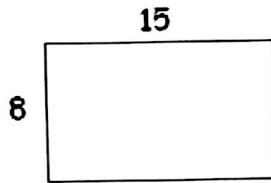


DOMAIN IV

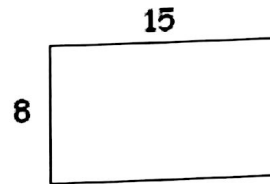
Common Core Math 7 EOG Questions- Geometry

1. The side lengths of the original figure in the diagram are dilated by a scale factor of $\frac{1}{4}$. Which statement describes the new figure that results?



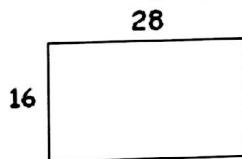
- A. The perimeter of the original figure is 4 times larger than the new figure.
- B. The perimeter of the original figure is 12 times larger than the new figure.
- C. The perimeter of the original figure is 15 times larger than the new figure.
- D. The perimeter of the original figure is 16 times larger than the new figure.

2. The side lengths of the original figure in the diagram are dilated by a scale factor of $\frac{1}{4}$. Which statement describes the new figure that results?



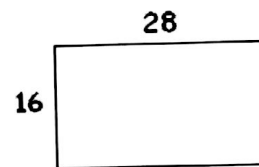
- A. The area of the original figure is 4 times larger than the new figure.
- B. The area of the original figure is 12 times larger than the new figure.
- C. The area of the original figure is 15 times larger than the new figure.
- D. The area of the original figure is 16 times larger than the new figure.

3. The side lengths of the figure in the diagram are dilated by a scale factor of $\frac{1}{2}$. What is the perimeter of the resulting figure?



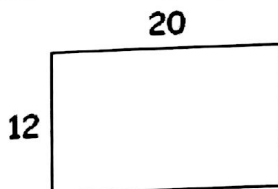
- A. 22
- B. 44
- C. 66
- D. 88

4. The side lengths of the figure in the diagram are dilated by a scale factor of $\frac{1}{2}$. What is the area of the resulting figure?



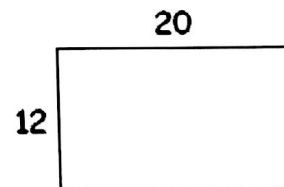
- A. 448
- B. 224
- C. 112
- D. 28

5. The side lengths of the figure in the diagram are dilated by a scale factor of 4. What is the perimeter of the resulting figure?



- A. 32
- B. 64
- C. 128
- D. 256

6. The side lengths of the figure in the diagram are dilated by a scale factor of 4. What is the area of the resulting figure?



- A. 3,840
- B. 960
- C. 480
- D. 240

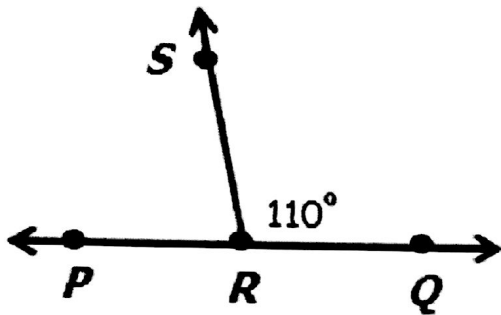
7. Which side lengths would form a triangle?

- A. 12 feet, 14 feet, 1 foot
- B. 12 feet, 4 feet, 11 feet
- C. 5 inches, 6 inches, 12 inches
- D. 3 inches, 10 inches, 15 inches

8. Which side lengths would not form a triangle?

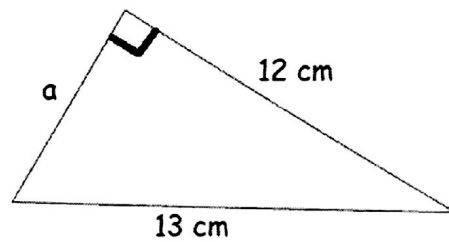
- A. 3 inches, 4 inches, 6 inches
- B. 5 feet, 10 feet, 12 feet
- C. 7 inches, 10 inches, 18 inches
- D. 8 inches, 12 inches, 19 inches

9. If $\angle SRQ$ is 110° , what is the measure of $\angle SRP$?



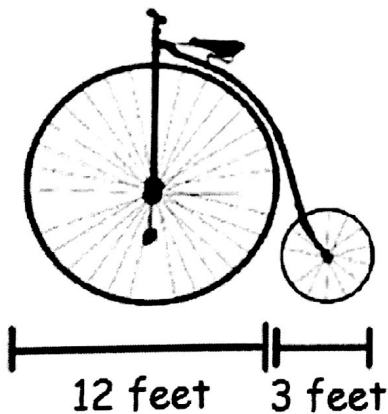
- A. 70°
- B. 80°
- C. 90°
- D. 110°

10. The area of the triangle below is 30 cm^2 . What is the length of A?



- A. 2.5 cm
- B. 3.1 cm
- C. 4.6 cm
- D. 5 cm

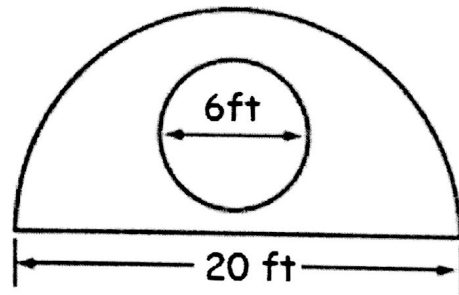
11. The wheels on a bicycle are circles. The diameter of the large wheel is 4 times the diameter of the small wheel.



How many times greater is the area of the large wheel than the area of the small wheel?

- A. 3 times greater
- B. 4 times greater
- C. 9 times greater
- D. 16 times greater

12. The Brown family is putting a concrete patio around a hot tub in their backyard. The shaded region below shows the area that will be covered with concrete.



About how much concrete will be needed?

- A. 129 ft^2
- B. 286 ft^2
- C. 600 ft^2
- D. 1228 ft^2

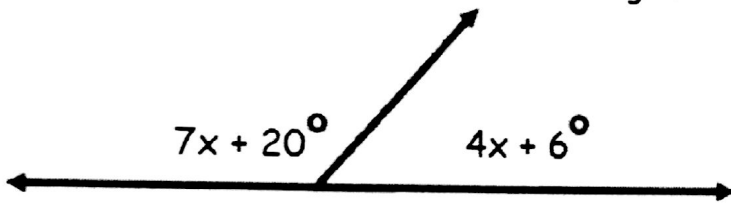
13. Which side lengths would not form a triangle?

- A. 8 feet, 9 feet, 15 feet
- B. 15 inches, 20 inches, 1 foot
- C. 7 inches, 13 inches, 8 inches
- D. 7 inches, 25 inches, 9 inches

14. $\angle N$ and $\angle M$ are vertical angles. If $\angle N = 63^\circ$, and $\angle M$ is represented by the expression $2x - 5$, what is the value of x ?

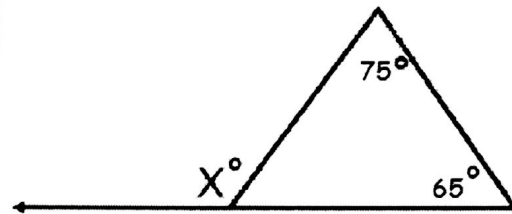
- A. 61°
- B. 34°
- C. 29°
- D. 16°

15. What is the measure of the acute angle?



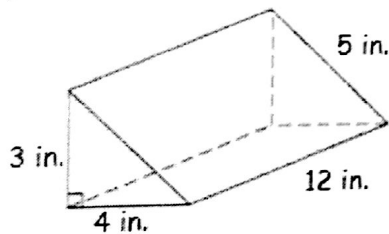
- A. 14°
- B. 50°
- C. 62°
- D. 118°

16. What is the value of x ?



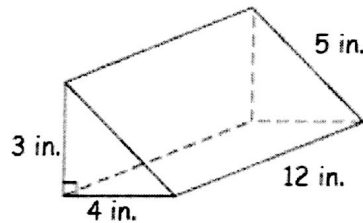
- A. 40°
- B. 50°
- C. 130°
- D. 140°

17. What is the surface area of the triangular prism?



- A. 720 in^2
- B. 156 in^2
- C. 150 in^2
- D. 96 in^2

18. What is the volume of the triangular prism?



- A. 720 in^3
- B. 360 in^3
- C. 144 in^3
- D. 72 in^3

19. A square prism has a height of 16 inches and a base length of 7 inches. If the dimensions of the prism are tripled, what will be the ratio of the volume of the original prism to the new prism?

- A. 1 : 3
- B. 1 : 9
- C. 1 : 27
- D. 1 : 30

20. A square prism has a height of 16 inches and a base length of 7 inches. If the dimensions of the prism are tripled, what will be the ratio of the surface area of the original prism to the new prism?

- A. 1 : 3
- B. 1 : 9
- C. 1 : 27
- D. 1 : 30