Unit 5: Proportional Relationships

PRACTICE

Name: _____ Date: _____

Show your work where needed and write your final answer on the line. Use pi in answers unless told to round.

1. A recipe uses 3 cups of flour for every 2 cups of sugar. This is a proportional relationship. How many cups of flour are needed for 8 cups of sugar?

Answer: _____

2. In a proportional relationship, y = 15 when x = 3. Find the constant of proportionality k (where y = kx).

Answer: _____

3. In a proportional relationship y = kx, the constant of proportionality is 7. Find y when x = 6.

Answer: _____

4. A car travels 120 miles in 2 hours at a constant speed. At this proportional rate, how many miles does it travel in 5 hours?

Answer: _____

5. Is the relationship given by the table proportional? x: 2, 4, 6 and y: 6, 12, 18. Answer yes or no.

Answer: _____

6. A circle has a radius of 5 cm. Find its circumference in terms of pi (use C = 2 × pi × r).

Answer: _____

7. A circle has a diameter of 14 in. Find its circumference in terms of pi (use C = pi × d).

Answer: _____

8. A circle has a radius of 3 m. Find its area in terms of pi (use A = pi × r^2).

Answer: _____

9. A circle has a diameter of 10 ft. Find its area in terms of pi (use A = pi × r^2).

Answer: _____

10. A circle has a circumference of 18pi cm. Find its radius (use C = 2 × pi × r).

Answer: _____

11. A circle has an area of 49pi square units. Find its radius (use A = pi × r^2).

Answer: _____

12. 8 pencils cost $2.00 at a constant unit rate. At this proportional rate, what is the cost in dollars of 20 pencils?

Answer: _____