

Unit 5: Proportional Relationships

CONCEPT

Name: _____ Date: _____

Solve each problem and write your final answer; leave answers in terms of π where the problem says to.

1. The quantity y is proportional to x . When $x = 5$, $y = 15$. What is the constant of proportionality k (where $y = kx$)?

Answer: _____

3. A proportional relationship is given by $y = 4x$. Find y when $x = 9$.

Answer: _____

5. A circle has a radius of 6 m. What is its diameter, in m?

Answer: _____

7. Using $C = 2 \times \pi \times r$, find the circumference of a circle whose radius is 7. Leave your answer in terms of π .

Answer: _____

9. Using $A = \pi \times r^2$, find the area of a circle whose radius is 5. Leave your answer in terms of π .

Answer: _____

11. For every circle, the ratio of the circumference to the diameter (C/d) equals the same constant. What is that constant?

Answer: _____

2. 3 notebooks cost \$6 in total. At the same rate, what is the cost of 1 notebook, in dollars?

Answer: _____

4. A circle has a diameter of 14 cm. What is its radius, in cm?

Answer: _____

6. Using $C = \pi \times d$, find the circumference of a circle whose diameter is 8. Leave your answer in terms of π .

Answer: _____

8. Using $A = \pi \times r^2$, find the area of a circle whose radius is 4. Leave your answer in terms of π .

Answer: _____

10. Using $\pi = 3.14$ and $C = \pi \times d$, find the circumference of a circle whose diameter is 10.

Answer: _____

12. 5 concert tickets cost \$20 in total. At the same rate, how much do 8 tickets cost, in dollars?

Answer: _____