

Rates

Name _____

Date _____

A **rate** is a ratio that compares two quantities with different units of measure.

A **unit rate** is a rate that has 1 unit as its second term, or denominator.

$$\frac{80 \text{ breaths}}{2 \text{ minutes}} = \frac{x \text{ breaths}}{1 \text{ minute}} \rightarrow \frac{80 \div 2}{2 \div 2} = \frac{40}{1}$$

40 breaths in 1 minute is called a unit rate.

Write each as a unit rate.

1. $\frac{64 \text{ feet}}{2 \text{ seconds}} = \frac{\text{feet}}{1 \text{ second}}$

2. $\frac{12 \text{ apples}}{4 \text{ children}} = \frac{\text{apples}}{1 \text{ child}}$

3. $\frac{24 \text{ crayons}}{3 \text{ boxes}} = \frac{\text{crayons}}{1 \text{ box}}$

4. $\frac{150 \text{ pages}}{2 \text{ hours}} = \frac{\text{pages}}{\text{hour}}$

5. $\frac{8 \text{ quarts}}{16 \text{ pints}} = \frac{\text{quart}}{\text{pints}}$

6. $\frac{165 \text{ miles}}{3 \text{ hours}} = \frac{\text{miles}}{\text{hour}}$

Find the unit rate or unit price.

7. 40 meters in 5 seconds _____

8. 135 miles in 3 hours _____

9. 6 pears for \$2.10 _____

10. 3 books for \$8.85 _____

11. 24 pens in 2 boxes _____

12. \$44 for 8 hours _____

Use the unit rate or the unit price to complete.

13. \$4 for 1 ticket
_____ for 3 tickets

14. 30 miles in 1 hour
_____ in 5 hours

15. 1 pencil for 20¢
3 pencils for _____

16. 80 words in 1 minute
_____ in 5 minutes

17. 1 book for \$3.50
4 books for _____

18. 32 miles on 1 gallon
_____ on 12 gallons

Problem Solving

19. A pilot flew his plane 225 mi in 45 minutes.
What was his speed per minute?

20. A 3-lb loaf of bread costs \$5.25. At the same rate
per pound, how much would a 1-lb loaf cost?

21. Maria earns \$6.50 per hour. How much does she
earn working 15 hours?
