REVIEW: Dividing Fractions

Name _____

Key Concept and Vocabulary

$$\frac{2}{3} \div \frac{1}{2} = \frac{2}{3} \cdot \frac{2}{1} = \frac{2 \cdot 2}{3 \cdot 1} = \frac{4}{3}$$

Invert and multiply.

Visual Model

There are 2 "one-thirds" in two-thirds.

$$\frac{2}{3} \div \frac{1}{3} = \frac{2}{3} \cdot \frac{3}{1} = 2$$

Skill Examples

1. $\frac{2}{5} \div \frac{1}{5} = \frac{2}{5} \cdot \frac{5}{1} = \frac{2 \cdot 5}{5 \cdot 1} = 2$
2. $\frac{2}{5} \div 5 = \frac{2}{5} \cdot \frac{1}{5} = \frac{2 \cdot 1}{5 \cdot 5} = \frac{2}{25}$
3. $\frac{9}{4} \div \frac{3}{4} = \frac{9}{4} \cdot \frac{4}{3} = \frac{9 \cdot 4}{4 \cdot 3} = 3$
4. $6 \div \frac{1}{2} = \frac{6}{1} \cdot \frac{2}{1} = \frac{6 \cdot 2}{1 \cdot 1} = 12$

Application Example

5. You drive 25 miles in one-half hour. What is your average rate?

$$25 \div \frac{1}{2} = \frac{25}{1} \cdot \frac{2}{1} = 50 \text{ mi/h} \qquad r = \frac{d}{t}$$

∴ Your average rate is 50 miles per hour.

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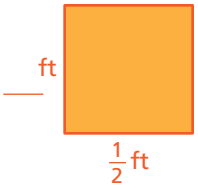
Check your answers at BigIdeasMath.com

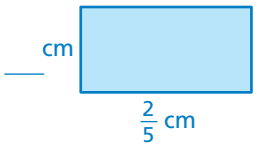
Find the quotient. Write your answer in simplified form.

6. $\frac{3}{5} \div \frac{1}{5} =$ _____
7. $4 \div \frac{1}{2} =$ _____
8. $\frac{2}{3} \div \frac{1}{6} =$ _____
9. $\frac{1}{6} \div \frac{2}{3} =$ _____
10. $\frac{2}{3} \div 2 =$ _____
11. $\frac{3}{4} \div 4 =$ _____
12. $\frac{3}{7} \div \frac{3}{7} =$ _____
13. $\frac{3}{7} \div \frac{7}{3} =$ _____
14. $5 \div \frac{1}{2} =$ _____
15. $\frac{9}{4} \div \frac{1}{4} =$ _____
16. $\frac{1}{4} \div \frac{1}{2} =$ _____
17. $\frac{3}{11} \div 11 =$ _____

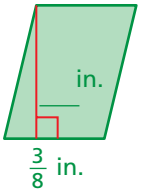
Find the height of the rectangle or parallelogram.

18. 

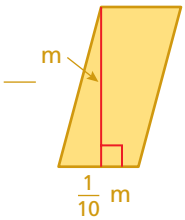
Area $= \frac{1}{4}$ ft^2

19. 

Area $= \frac{2}{25}$ cm^2

20. 

Area $= \frac{3}{16}$ in.^{2}

21. 

Area $= \frac{1}{50}$ m^2

22. **SPEED** You drive 15 miles in one-fourth hour. What is your average speed? _____

23. **MAGNETIC TAPE** A refrigerator magnet uses $\frac{5}{8}$ inch of magnetic tape. How many refrigerator magnets can you make with 10 inches of magnetic tape? Explain.

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