

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

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

Application Example

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

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

❖ Your average rate is 50 miles per hour.

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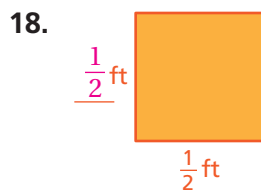


Check your answers at BigIdeasMath.com

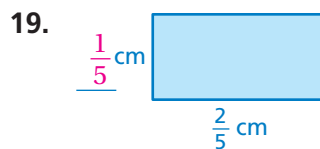
Find the quotient. Write your answer in simplified form.

- $\frac{3}{5} \div \frac{1}{5} = \underline{3}$
- $4 \div \frac{1}{2} = \underline{8}$
- $\frac{2}{3} \div \frac{1}{6} = \underline{4}$
- $\frac{1}{6} \div \frac{2}{3} = \underline{\frac{1}{4}}$
- $\frac{2}{3} \div 2 = \underline{\frac{1}{3}}$
- $\frac{3}{4} \div 4 = \underline{\frac{3}{16}}$
- $\frac{3}{7} \div \frac{3}{7} = \underline{1}$
- $\frac{3}{7} \div \frac{7}{3} = \underline{\frac{9}{49}}$
- $5 \div \frac{1}{2} = \underline{10}$
- $\frac{9}{4} \div \frac{1}{4} = \underline{9}$
- $\frac{1}{4} \div \frac{1}{2} = \underline{\frac{1}{2}}$
- $\frac{3}{11} \div 11 = \underline{\frac{3}{121}}$

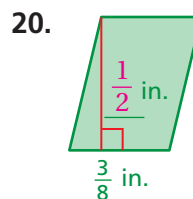
Find the height of the rectangle or parallelogram.



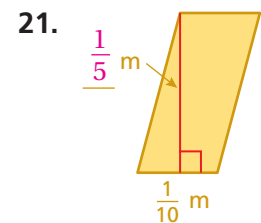
$$\text{Area} = \frac{1}{4} \text{ ft}^2$$



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



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



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

- SPEED** You drive 15 miles in one-fourth hour. What is your average speed? 60 mi/h

- 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.

$$16 \text{ magnets; } 10 \div \frac{5}{8} = \frac{10}{1} \cdot \frac{8}{5} = \frac{10 \cdot 8}{1 \cdot 5} = 16$$