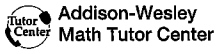


## 5.4 Exercises

FOR  
EXTRA  
HELP



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Find the unknown number in each proportion. Round your answers to hundredths, if necessary. Check your answers by finding the cross products. See Examples 1 and 2.

$$1. \frac{1}{3} = \frac{x}{12}$$

$$2. \frac{x}{6} = \frac{15}{18}$$

$$3. \frac{15}{10} = \frac{3}{x}$$

$$4. \frac{5}{x} = \frac{20}{8}$$

$$5. \frac{x}{11} = \frac{32}{4}$$

$$6. \frac{12}{9} = \frac{8}{x}$$

$$7. \frac{42}{x} = \frac{18}{39}$$

$$8. \frac{49}{x} = \frac{14}{18}$$

$$9. \frac{x}{25} = \frac{4}{20}$$

$$10. \frac{6}{x} = \frac{4}{8}$$

$$11. \frac{8}{x} = \frac{24}{30}$$

$$12. \frac{32}{5} = \frac{x}{10}$$

$$\text{13. } \frac{99}{55} = \frac{44}{x}$$

$$\text{14. } \frac{x}{12} = \frac{101}{147}$$

$$\text{15. } \frac{0.7}{9.8} = \frac{3.6}{x}$$

$$\text{16. } \frac{x}{3.6} = \frac{4.5}{6}$$

$$\text{17. } \frac{250}{24.8} = \frac{x}{1.75}$$

$$\text{18. } \frac{4.75}{17} = \frac{43}{x}$$

Find the unknown number in each proportion. Write your answers as whole or mixed numbers when possible. See Example 2.

$$19. \frac{15}{2\frac{1}{3}} = \frac{9}{x}$$

$$20. \frac{x}{\frac{3}{10}} = \frac{2\frac{2}{9}}{1}$$

$$21. \frac{2\frac{1}{3}}{1\frac{1}{2}} = \frac{x}{2\frac{1}{4}}$$

$$22. \frac{1\frac{5}{6}}{x} = \frac{\frac{3}{14}}{\frac{6}{7}}$$

Solve each proportion two different ways. First change all the numbers to decimal form and solve. Then change all the numbers to fraction form and solve; write your answers in lowest terms.

$$23. \frac{\frac{1}{2}}{x} = \frac{2}{0.8}$$

$$24. \frac{\frac{3}{20}}{0.1} = \frac{0.03}{x}$$

$$25. \frac{x}{\frac{3}{50}} = \frac{0.15}{1\frac{4}{5}}$$

$$26. \frac{8\frac{4}{5}}{1\frac{1}{10}} = \frac{x}{0.4}$$

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**RELATING CONCEPTS (EXERCISES 27–28)** For Individual or Group Work

Work Exercises 27–28 in order. First prove that the proportions are **not** true. Then create four true proportions for each exercise by changing one number at a time.

$$27. \frac{10}{4} = \frac{5}{3}$$

$$28. \frac{6}{8} = \frac{24}{30}$$


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