

Alg 1 2.6

Compare ratios
Solve proportions

ratio
proportion
cross-products
scale
scale model

$$\begin{array}{c} C \\ | \\ \frac{7}{3} = \frac{C}{90} \\ H \end{array}$$

$$\frac{630}{3} = \frac{3C}{3}$$

$$210 = C$$

~~$$\frac{7}{3} = \frac{90}{C}$$
$$270 = 7C$$~~

Solve each proportion. If necessary, round to the nearest hundredth.

15. $\frac{3}{8} = \frac{15}{a}$

$$\frac{3a}{3} = \frac{120}{3}$$

$$a = 40$$

16. $\frac{t}{2} = \frac{6}{12}$

$$\frac{12}{12} = \frac{12t}{12}$$

$$1 = t$$

17. $\frac{4}{9} = \frac{13}{q}$

$$\frac{4q}{4} = \frac{117}{4}$$

$$q = 29.25$$

$$29$$

$$27. \frac{(x-3)}{5} = \frac{6}{10}$$

$$28. \frac{7}{x+9} = \frac{21}{36}$$

$$29. \frac{10}{15} = \frac{4}{x-5}$$

$$30 = 10(x-3)$$

$$21x + 9 =$$

$$\begin{array}{r} 30 = 10x - 30 \\ +30 \qquad \qquad +30 \end{array}$$

ice odds +16

$$\frac{60}{10} = \frac{10x}{10}$$

$$6 = x$$

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32.  **PRECISION** An artist used interlocking building blocks to build a scale model of Kennedy Space Center, Florida. In the model, 1 inch equals 1.67 feet of an actual space shuttle. The model is 110.3 inches tall. How tall is the actual space shuttle? Round to the nearest tenth.
33. **MENU** On Monday, a restaurant made \$545 from selling 110 hamburgers. If they sold 53 hamburgers on Tuesday, how much did they make?

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40. **ATHLETES** At Piedmont High School, 3 out of every 8 students are athletes. If there are 1280 students at the school, how many are not athletes?
41. **BRACES** Two out of five students in the ninth grade have braces. If there are 325 students in the ninth grade, how many have braces?

