

Proportions Worksheet Answer Key

$$\frac{\text{Proportions}}{D^2} = \frac{NB}{D}; \text{ Proportions} = NBD$$

Evaluate.

1. $\frac{3}{4} = \frac{x}{45}$

$$4 \times x = 3 \times 45 \implies x = \frac{135}{4}.$$

2. $\frac{x}{9} = \frac{2}{3}$

$$3 \times x = 2 \times 9 \implies x = \frac{18}{3} = 6.$$

3. $\frac{2}{x} = \frac{1}{12}$

$$2 \times 12 = 1 \times x \implies 24 = x.$$

4. $\frac{3}{2} = \frac{45}{a}$

$$3a = 8 \times 45 \implies a = 120.$$

5. $\frac{22}{2.4} = \frac{a}{6}$

$$22 \times 6 = 2.4a \implies a = \frac{132}{2.4} = 55.$$

6. $\frac{13}{a} = \frac{39}{50}$

$$13 \times 50 = 39a \implies a = \frac{650}{39}.$$

Is each pair of proportions below equivalent?

7. $\frac{4}{5}$ and $\frac{20}{25}$

$$\frac{20}{25} = \frac{4}{5}. \text{ Yes.}$$

8. $\frac{2}{3}$ and $\frac{32}{48}$

$$\frac{32}{48} = \frac{8}{12} = \frac{4}{6} = \frac{2}{3}. \text{ Yes.}$$

9. $\frac{9}{15}$ and $\frac{30}{150}$

$$\frac{9}{15} = \frac{3}{5} \text{ and } \frac{30}{150} = \frac{3}{15}. \text{ No.}$$

10. $\frac{120}{144}$ and $\frac{8}{64}$

$$\frac{120}{144} = \frac{10}{12} = \frac{5}{6} \text{ and } \frac{8}{64} = \frac{1}{8}. \text{ No.}$$

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