

**YTI 5**

Solve each equation and verify the solution. Use example 6 as a guide.

a)  $\frac{1}{2}(2h - 1) = \frac{1}{3}\left(2h + \frac{1}{2}\right)$

b)  $0.5(p + 3) = 3(0.1 + 0.16p)$

c)  $\frac{1}{8}(3y + 2) = \frac{1}{4}\left(2y + \frac{1}{2}\right) + \frac{1}{2}$

d)  $0.6(10n - 3) = 1.5(n + 2) - 0.3$

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Solve each equation and verify the solution. Use example 6 as a guide.

a)  $\frac{1}{2}(2h - 1) = \frac{1}{3}(2h + \frac{1}{2})$

$$1h - \frac{1}{2} = \frac{2}{3}h + \frac{1}{6}$$

$$\frac{6}{6}h - \frac{3}{6} = \frac{4}{6}h + \frac{1}{6}$$

$$+ \frac{3}{6} \qquad + \frac{3}{6}$$

$$\frac{6}{6}h = \frac{4}{6}h + \frac{4}{6}$$

$$-\frac{4}{6}h \quad -\frac{4}{6}h$$

$$\frac{6}{2} \cdot \frac{2}{6}h = \frac{4}{6} \cdot \frac{6}{2}$$

$$\boxed{h = 2}$$

c)  $\frac{1}{8}(3y + 2) = \frac{1}{4}(2y + \frac{1}{2}) + \frac{1}{2}$

$$\frac{3}{8}y + \frac{2}{8} = \frac{2}{4}y + \frac{1}{8} + \frac{1}{2}$$

$$\frac{3}{8}y + \frac{2}{8} = \frac{4}{8}y + \frac{1}{8} + \frac{4}{8}$$

$$\frac{3}{8}y + \frac{2}{8} = \frac{4}{8}y + \frac{5}{8}$$

$$-\frac{2}{8} \qquad -\frac{2}{8}$$

$$\frac{3}{8}y = \frac{4}{8}y + \frac{3}{8}$$

$$-\frac{4}{8}y \quad -\frac{4}{8}y$$

$$-\frac{1}{8} - \frac{1}{8}y = \frac{3}{8} \cdot -\frac{8}{1}$$

$$\boxed{y = -3}$$

b)  $0.5(p + 3) = 3(0.1 + 0.16p)$

$$0.5p + 1.5 = 0.3 + 0.48p$$

$$-0.3 \quad -0.3$$

$$0.5p + 1.2 = 0.48p$$

$$-0.5p \quad -0.5p$$

$$1.2 = -0.02p$$

$$-0.02 \quad -0.02$$

$$\boxed{-60 = p}$$

d)  $0.6(10n - 3) = 1.5(n + 2) - 0.3$

$$6n - 1.8 = 1.5n + 3 - 0.3$$

$$6n - 1.8 = 1.5n + 2.7$$

$$+1.8 \qquad +1.8$$

$$6n = 1.5n + 4.5$$

$$-1.5n \quad -1.5n$$

$$4.5n = 4.5$$

$$4.5 \quad 4.5$$

$$\boxed{n = 1}$$