

Solve for the variable. SHOW ALL WORK!!!

1) $\underline{-4y = 12}$
 $\underline{-4} \quad \underline{-4}$
 $y = -3$

2) $\underline{6 + x = 5}$
 $\underline{-6} \quad \underline{-6}$
 $x = -1$

3) ~~$\frac{p}{3} = 4 \cdot 3$~~
 $p = 12$

$x + 6 = 5$

4) $\underline{3x - 4 = 12}$
 $\underline{+4} \quad \underline{+4}$
 $\underline{3x} = 16$
 $\underline{3} \quad \underline{3}$
 $x = \frac{16}{3}$

5)

$$\overline{-4 + 3p = 19}$$

$$\begin{array}{r} 3p - 4 = 19 \\ \underline{+4} \quad \underline{+4} \end{array}$$

$$\begin{array}{r} 3p = 23 \\ \underline{3} \quad \underline{3} \end{array}$$

$$p = \frac{23}{3}$$

6)

$$\overline{6 = 4 - 2y}$$

$$4 - 2y = 6$$

$$-2y + 4 = 6$$

$$\begin{array}{r} -4 \quad -4 \\ \underline{-4} \quad \underline{-4} \end{array}$$

$$\begin{array}{r} -2y = 2 \\ \underline{-2} \quad \underline{-2} \end{array}$$

$$y = -1$$

If you don't like the order re-write the problem

subtract

divide

7)

$$3(x-1)=12$$

$$3x - \cancel{3} = 12$$

$$\underline{+3} \quad \underline{+3}$$

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

$$x = 5$$

Distribute

undo subtract

undo multiply

8)

$$5 = -2(2-k)$$

$$5 = -4 + 2k$$

$$\underline{+4} \quad \underline{+4}$$

$$\frac{9}{2} = 2k$$

$$k = \frac{9}{2}$$

or

$$5 = 2k - 4$$

$$\underline{+4} \quad \underline{+4}$$

$$\frac{9}{2} = 2k$$

9)

$$6 - 2(p+2) = 4 + p$$

Distribute

$$6 - 2p - 4 = 4 + p$$

Combine like terms

$$-2p + 2 = 4 + p$$

$$\underline{+2p} \quad \underline{+2p}$$

p's on same side

$$2 = 4 + 3p$$

Undo add

$$\underline{-4} \quad \underline{-4}$$

$$\underline{-2} = \underline{3p}$$

$$\underline{3} \quad \underline{3}$$

Undo mult.

$$\underline{-\frac{2}{3}} = p$$