

Name
9/12 or 9/13

Alg I.

Solve Equations with Variables on Both Sides

I can solve equations with variables on both sides.

Example 1:

$$1) 24 - 3m = 5m$$

$$\quad +3m \quad +3m$$

$$\hline 24 = 8m$$

$$\frac{8}{8} \quad \frac{8}{8}$$

$$\boxed{m = 3}$$

$$2) 20 + c = 4c - 7$$

$$\quad -c \quad -c$$

$$\hline 20 = 3c - 7$$

$$+7 \quad +7$$

$$\hline 27 = 3c$$

$$\frac{3}{3} \quad \frac{3}{3}$$

$$\boxed{c = 9}$$

$$3) 9 - 3k = 17 - 2k$$

$$\quad +3k \quad +3k$$

$$\hline 9 = 17 + k$$

$$-17 \quad -17$$

$$\hline \boxed{k = -8}$$

Example 2:

$$4) 5z - 2 = 2(3z - 4)$$

$$5z - 2 = 6z - 8$$

$$\quad -5z \quad -5z$$

$$\hline -2 = z - 8$$

$$+8 \quad +8$$

$$\hline \boxed{z = 6}$$

$$5) 3 - 4a = 5(a - 3)$$

$$3 - 4a = 5a - 15$$

$$\quad +4a \quad +4a$$

$$\hline 3 = 9a - 15$$

$$+15 \quad +15$$

$$\hline 18 = 9a$$

$$\frac{18}{9} \quad \frac{9}{9}$$

$$\boxed{a = 2}$$