

EQUATIONS

HARD

1. $4x - 9 + 3x + 7 = 26$

$$7x - \cancel{2} = 26$$
$$+ \cancel{2} \quad + 2$$

$$\frac{7x}{7} = \frac{28}{7}$$

$$\boxed{x = 4}$$

2. $6a + 9 = 3a - 12$

$$-3a \quad -3a$$

$$3a + \cancel{9} = -12$$
$$- \cancel{9} \quad - 9$$

$$\frac{3a}{3} = \frac{-21}{3}$$

$$\boxed{a = -7}$$

3. $5y + 12 - 2y - 3 = 21$

$$3y + \cancel{9} = 21$$
$$- \cancel{9} \quad - 9$$

$$\frac{3y}{3} = \frac{12}{3}$$

$$\boxed{y = 4}$$

4. $8 + 3c = 5c - 4$

$$-3c \quad -3c$$

$$8 = 2c - \cancel{4}$$
$$+ 4 \quad + 4$$

$$\frac{12}{2} = \frac{2c}{2}$$

$$\boxed{6 = c}$$

5. $2z + 6 - 3z - 5 = 14$

$$-z + \cancel{1} = 14$$
$$- \cancel{1} \quad - 1$$

$$\frac{-z}{-1} = \frac{13}{-1}$$

$$\boxed{z = -13}$$

6. $10e - 10 = 2e + 6$

$$-2e \quad -2e$$

$$8e - \cancel{10} = 6$$
$$+ \cancel{10} \quad + 10$$

$$\frac{8e}{8} = \frac{16}{8}$$

$$\boxed{e = 2}$$

7. $-3a + 6 - 2a - 2 = -16$

$$-5a + \cancel{4} = -16$$
$$- \cancel{4} \quad - 4$$

$$\frac{-5a}{-5} = \frac{-20}{-5}$$

$$\boxed{a = 4}$$

8. $3g - 8 = 2g + 14$

$$-2g \quad -2g$$

$$g - \cancel{8} = 14$$
$$+ \cancel{8} \quad + 8$$

$$\boxed{g = 22}$$

