

6.1 45)

Evaluate algebraic expressions for given values + Rashonda Rhodes

①

$$-7x + 8$$

$$x = -2$$

$$-7(-2) + 8 = 14 + 8 = \boxed{22}$$

46)

$$x^2 + 2x$$

$$x = 5$$

$$5^2 + 2(5) = 25 + 10 = \boxed{35}$$

47)

$$6(2x-1) - 8(x-3)$$

$$12x - 6 = 8x + 24$$

$$4x + 18$$

6.2 48)

Solve + check equation

$$\begin{array}{r} -3x - 3 = 10y + 3y \\ +3y + 1 \\ \hline -2 = 13y \\ = 13 \end{array}$$

$$y = \frac{-2}{13}$$

49)

$$3(4x-2) + 2(3x+3) = 3x - 30$$

$$12x - 6 + 6x + 6 = 3x - 30$$

$$18x = 3x - 30$$

$$-3x = -30$$

$$15x = -30$$

$$15$$

$$x = -2$$

50)

~~$$\frac{2}{7} = \frac{3}{x}$$~~

$$2x = 21$$

$$x = \frac{21}{2}$$

51) $\begin{pmatrix} 15 \\ 1 \end{pmatrix} \cdot 7y - 6 = \frac{y}{5} - 2 \cdot \begin{pmatrix} 15 \\ 51 \end{pmatrix}$ by $\frac{273}{5}$ is equal $\textcircled{2}$

$$\frac{105y}{5} - 90 = \frac{15y}{5} - 30$$

$$\begin{array}{r} 7y - 90 = 3y - 30 \\ -3y \quad -90 \quad -3y \\ \hline 4y - 90 = -30 \end{array}$$

$$4y \textcircled{-90} = \textcircled{-30} \textcircled{+90}$$

$$4y = 60$$

$$y = 15$$

6.3 52)

$$x \textcircled{+293} = 674 \rightarrow \boxed{x = 381}$$

53)

$$\begin{pmatrix} 3x \\ 1/3 \end{pmatrix} = 5 \begin{pmatrix} 3 \\ 1 \end{pmatrix} \rightarrow \frac{3x}{3} = 15$$

$$\boxed{x = 5}$$

54) $7(7-x) = 105$

$$\begin{array}{r} 49 \textcircled{+7x} = \textcircled{105} \\ -105 \quad \textcircled{+105} \end{array}$$

$$\frac{7x}{7} = \frac{-56}{7}$$

$$\boxed{x = -8}$$

55)

$$I = \frac{P_{rd}}{rt} \text{ for } P$$

$$P = \frac{I}{rt}$$

③

56) $3V = \frac{3}{13} Bh \text{ such}$

$$\frac{3V}{B} = \frac{Bh}{B} \rightarrow \frac{3V}{B} = h$$

57)

$$S = 2\pi rh + \frac{2\pi r^2}{2} \text{ such}$$

$$\frac{S - 2\pi r^2}{2\pi r} = \frac{2\pi rh}{2\pi r}$$

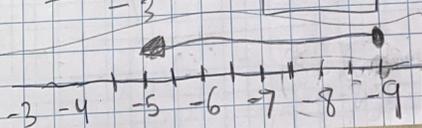
$$rh = \frac{S - 2\pi r^2}{2\pi r}$$

6.4

58)

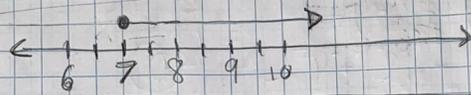
$$\frac{-3x \geq 27}{-3}$$

$$x \leq 9$$

(Switch when negative)
sign

$$59) \quad 13x - 8 \geq 12x - 1$$

$$x - 8 \geq -1 \rightarrow x \geq 7$$



(4)

6.5

60)

$$(x+2)(x+12) = \text{Simplify}$$

FOIL

$$x^2 + 12x + 2x + 24 = x^2 + 14x + 24$$

61)

$$x^2 + 5x - 66 = 0$$

Solve by factoring

$$(5x - 11x - 6x)$$

write as a difference

$$(x+11)(x-6)$$

$$(11) \cdot (-6) = 66$$

$$(11) - (-6) = 5$$

(factor)

$$x + 11 = 0 \rightarrow x = -11$$

$$x - 6 = 0 \rightarrow x = 6$$

$$(x+11)(x-6)$$

PENDAS

62)

$$5x^2 - 4x - 9 \rightarrow ax^2 + bx + c = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$b^2 - 4ac =$$

$$(-4)^2 - 4(5)(-9) \quad x = 4 \pm \sqrt{180}$$

$$16 + 180$$

$$(25) \leq 10$$

$$x = 4 - \sqrt{180}$$

$$x = 4 + \frac{\sqrt{180}}{10}$$

10