

$$\textcircled{1} \quad 3y = 7(7y-4)$$

$$3y = 49y - 28$$

$$-46y = -28$$

$$y = \frac{28}{46} = \boxed{\frac{14}{23}}$$

$$\textcircled{2} \quad 4(4x-2) = 3x-6$$

$$16x - 8 = 3x - 6$$

$$13x = 2$$

$$x = \frac{2}{13} = \boxed{\frac{2}{13}}$$

$$\textcircled{3} \quad 4(4+y) = 5(7-4)$$

$$16 + 4y = 35 - 20$$

$$4y = -4$$

$$y = \boxed{-1}$$

$$\textcircled{4} \quad 4(2z-2) = 7(z+3)$$

$$8z - 8 = 7z + 21$$

$$z - 8 = 21$$

$$z = \boxed{29}$$

$$\textcircled{5} \quad 4(2z-2) = 7(z-3)$$

$$8z - 8 = 7z - 21$$

$$z - 8 = -21$$

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

$$\textcircled{6} \quad -9x + 4(3x-4) = -8 - 5x$$

$$-9x + 12x - 16 = -8 - 5x$$

$$3x - 16 = -8 - 5x$$

$$8x - 16 = -8$$

$$8x = 8$$

$$x = \boxed{1}$$

$$\textcircled{7} \quad \frac{1}{5}x - 3 = 1$$

$$\frac{1}{5}x = 4$$

$$x = \boxed{20}$$

$$\textcircled{8} \quad \frac{1}{5}x + \frac{6}{5} = \frac{1}{7}x + \frac{8}{7}$$

$$7 \cdot \frac{1}{5}x + 7 \cdot \frac{6}{5} = 7 \cdot \frac{1}{7}x + 7 \cdot \frac{8}{7}$$

$$\frac{7}{5}x + \frac{42}{5} = x + 8$$

$$7x + 42 = 5x + 40$$

$$2x + 42 = 40$$

$$2x = -2$$

$$x = \boxed{-1}$$

$$\textcircled{9} \quad -0.30(50) + 0.80x = 0.30(50+x)$$

$$-15 + 0.80x = 15 + 0.30x$$

$$-15 + 0.50x = 15$$

$$0.50x = 30$$

$$x = \frac{30}{0.50} = \boxed{60}$$

$$\textcircled{10} \quad 0.80x - 0.70(50+x) = -0.60(50)$$

$$0.80x - 35 - 0.70x = -30$$

$$0.10x - 35 = -30$$

$$0.10x = 5$$

$$x = \frac{5}{0.10} = \boxed{50}$$

$$\textcircled{11} \quad d = rt$$

$$t = \frac{d}{r}$$

$$\textcircled{12} \quad A = \frac{1}{2}bh$$

$$2A = bh$$

$$h = \frac{2A}{b}$$

$$\textcircled{13} \quad V = \frac{1}{3}Ah$$

$$3V = Ah$$

$$h = \frac{3V}{A}$$

$$\textcircled{14} \quad p = a+b+c$$

$$p-a = b+c$$

$$c = p-a-b$$

$$\textcircled{15} \quad A = P + PRT$$

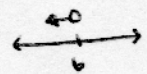
$$A-P = PRT$$

$$\frac{A-P}{P} = \frac{PRT}{P}$$

$$R = \frac{A-P}{PT}$$

$$\textcircled{16} \quad x+1 < 7$$

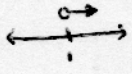
$$x < 6$$

$$(-\infty, 6)$$


$$\textcircled{17} \quad 6x-11 > 5x-10$$

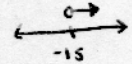
$$-5x > -10$$

$$x > 2$$

$$(2, \infty)$$


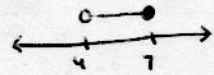
$$\textcircled{18} \quad -\frac{1}{5}x < 3$$

$$x > -15$$

$$(-15, \infty)$$


$$\textcircled{19} \quad \frac{12}{3} < \frac{3x}{3} \leq \frac{21}{3}$$

$$4 < x \leq 7$$

$$(4, 7]$$


$$\textcircled{20} \quad \frac{8}{-2} \leq \frac{3x+2}{-2} \leq \frac{17}{-2}$$

$$\frac{6}{3} \leq \frac{3x}{3} \leq \frac{15}{3}$$

$$2 \leq x \leq 5$$

$$[2, 5]$$
