

① 36 = 60

$$\frac{96-x}{x} = \frac{5}{3}$$

$$5x = 288 - 3x$$

$$8x = 288$$

$$x = 36$$

$$96-x = 60$$

② 99

$$\frac{96+87+94+95+93+x}{5} = \frac{94}{1}$$

$$x + 465 = 564$$

$$x = 99$$

③ 915

$$A = 113$$

$$B = 37$$

$$C = 625$$

$$D = \frac{140}{915}$$

④ 864

$$1st\# = x$$

$$2nd\# = 3x-6$$

$$4x-6 > 59$$

$$4x > 65$$

$$x > 16\frac{1}{4}$$

$$x = 18 \text{ and } 3x-6 = 48$$

$$(48)(48) = 864$$

⑤ 365

$$W = 27$$

$$X = 225$$

$$Y = 3$$

$$Z = \frac{110}{365}$$

⑥ 55

$$\# \text{ of nickels} = x$$

$$\# \text{ of dimes} = 5x + 5 = 55$$

$$\# \text{ of quarters} = 10x$$

$$5x + 10(5x+5) + 25(10x) = 3100$$

$$305x = 3050$$

$$x = 10$$

⑦ -7

$$A = 5$$

$$B = 24$$

$$C = 56$$

$$D = \frac{20}{-7}$$

⑧ $\frac{40}{3}$

t = time together

$$\frac{t}{4} + \frac{t}{8} - \frac{t}{5} - \frac{t}{10} = \frac{1}{1}$$

$$10t + 5t - 8t - 4t = 40$$

$$3t = 40$$

$$t = \frac{40}{3}$$

⑨ 20

midpoint $(-2, -6)$ $(-4, -2)$

$$m = \frac{-2-(-6)}{-4-(-2)} = \frac{4}{-2} = -2$$

$$y = -2x + b$$

$$-2 = -2(-4) + b \quad (-2)(-10) = 20$$

$$-10 = b$$

⑩ 115

$$A = 3600$$

$$\sqrt{A} = 60$$

$$B = 2500$$

$$\sqrt{B} = 50$$

$$C = 9$$

$$\sqrt{C} = 3$$

$$D = 4$$

$$\sqrt{D} = 2$$

$$115$$

⑪ $\frac{3}{25}$

$$1st\# = x$$

$$2nd\# = \frac{3}{4}x$$

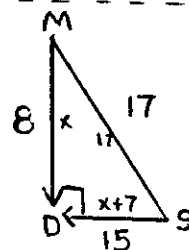
$$x + \frac{3}{4}x = \frac{7}{10}$$

$$\frac{7}{4}x = \frac{7}{10}$$

$$x = \frac{2}{5} ; \frac{3}{4}x = \frac{3}{10}$$

$$\frac{2}{5} \cdot \frac{3}{10} = \frac{6}{50} = \frac{3}{25}$$

⑫ 8



$$x^2 + (x+7)^2 = 17^2$$

$$x^2 + x^2 + 14x + 49 = 289$$

$$2x^2 + 14x - 240 = 0$$

$$2(x^2 + 7x - 120) = 0$$

$$2(x+15)(x-8) = 0$$

$$x = 8$$

⑬ 24

$$(18x + 5)(4x - 3)$$

$$18 + 5 + 4 - 3 = 24$$

⑭ $\frac{24}{5}$

t = time alone

$$\frac{3}{8} + \frac{3}{t} = \frac{1}{1}$$

$$\frac{3}{t} = \frac{5}{8}$$

$$5t = 24$$

$$t = \frac{24}{5}$$

⑮ \emptyset

$$\frac{2x+3}{x-1} - \frac{2x-3}{x+1} = \frac{10}{x^2-1}$$

$$(2x+3)(x+1) - (2x-3)(x-1) = 10$$

$$2x^2 + 5x + 3 - 2x^2 + 5x - 3 = 10$$

$$10x = 10$$

$$x = 1$$