

Boards (1)

1. $\frac{x}{x} = 16 \text{ ft}$

2. $\frac{x+3}{x} = 17 \text{ ft}$

3. $\frac{2x}{x} = 18 \text{ ft}$

4. $\frac{2x+4}{x} = 19 \text{ ft}$

5. $\frac{x}{x} = 20 \text{ ft}$

6. $\frac{x-5}{x} = 17 \text{ ft}$

7. $\frac{3x}{5x} = 16 \text{ ft}$

8. $\frac{x-3}{2x} = 12 \text{ ft}$

Together (2)

1. $\frac{W}{2x+4} \frac{R}{x} = 25$

2. $\frac{S}{3x-4} \frac{P}{x} = 20$

3. $\frac{C}{x-1} \frac{O}{3x} = 55$

4. $\frac{M}{x+5} \frac{T}{2x} = 35$

5. $\frac{H}{x+15} \frac{N}{x} = 35$

6. $\frac{S}{x-8} \frac{T}{x} = 26$

7. $\frac{L}{3x} \frac{S}{4x} = 161$

8. $\frac{B}{2x} \frac{C}{3x} = 45$

Angle (3)

1. $\frac{x+14}{3x} = 90^\circ$

2. $\frac{x-33}{2x} = 180^\circ$

3. $\frac{2x-3}{x} = 42^\circ$

4. $\frac{2x}{x} \frac{x}{x+2} = 180^\circ$

5. $\frac{x-9}{2x} = 70^\circ$

6. $\frac{x-24}{x} = 180^\circ$

7. $\frac{2x+2}{7x} = 82^\circ$

8. $\frac{x}{2x} \frac{2x+20}{x} = 150^\circ$

Perimeter (4)

1. $\frac{x+7}{2x} \frac{x+7}{x} = 26 \text{ ft}$

2. $\frac{x}{2x} \frac{x+5}{x} = 83 \text{ ft}$

3. $\frac{x}{3x-2} \frac{x}{x} = 18 \text{ ft}$

4. $\frac{2x}{x} \frac{2x-9}{x} = 21 \text{ ft}$

5. $\frac{L}{2x+3} \frac{W}{x} = 19 \text{ ft}$

6. $\frac{W}{x-6} \frac{L}{3x} = 26 \text{ ft}$

7. $\frac{W}{x+4} \frac{L}{2x} = 22 \text{ ft}$

8. $\frac{L}{3x-2} \frac{W}{x} = 34 \text{ ft}$

Number (5)

1. $2x+2 \oplus x = 11$

2. $3x-2 \ominus x = 8$

3. $x \otimes 2x = 32$

4. $x \oslash x+4 = \frac{2}{3}$

5. $x+3 \oplus 2x = 12$

6. $4x-5 \ominus x = 34$

7. $2x \otimes x = 98$

8. $x \oslash x-2 = \frac{5}{3}$

Integer (6)

1. $x \overbrace{x+1}^{+} \overbrace{x+2}^{+} = 21$

2. $x \overbrace{x+2}^{+} \overbrace{x+4}^{+} = 39$

3. $x \overbrace{x+1}^{+} \overbrace{x+2}^{+} = 42$

4. $x \overbrace{x+2}^{+} \overbrace{x+4}^{+} = 72$

5. $x \overbrace{x+1}^{+} \overbrace{x+2}^{+} \overbrace{x+3}^{+} = 18$
 $2x+4=18$

6. $x \overbrace{x+2}^{+} \overbrace{x+4}^{+} \overbrace{x+6}^{+} = 22$
 $2x+4=22$

7. $x \overbrace{x+1}^{+} \overbrace{x+2}^{+} = 24$
 $2x+2=24$

8. $x \overbrace{x+2}^{+} \overbrace{x+4}^{+} = 10$
 $2x+6=10$

Percent & Ratio (7)

1. $\frac{28}{85} = \frac{x}{100}$

2. $\frac{50}{480} = \frac{x}{100}$

3. $\frac{1.3}{26.5} = \frac{x}{100}$

4. $\frac{30.2}{4204} = \frac{x}{100}$

5. $2x \quad 3x = 35$

6. $2x \quad 5x \quad 7x = 168$

7. $x \quad 10x = 33$

8. $x \quad 2x = 24$

Money & Business (8)

1. $4.5 \times 400 =$

2. $6.25 \times 400 =$

3. $35 \times 206 =$

4. $10000 \times 2 =$

5. $38.5 \times 15 =$

6. $50 - 32.5 =$

7. $22.75 \times 20 =$

8. $145 - 12.25 =$

Work & Age (9)

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

$$2. \frac{1}{3} \cdot 2 + \frac{1}{x} \cdot 2 = 1$$

$$3. \frac{1}{2x} \cdot 3 + \frac{1}{x} \cdot 3 = 1$$

$$4. \frac{1}{2x} \cdot 4 + \frac{1}{3x} \cdot 4 = 1$$

$$5. \begin{matrix} T & + & P & = & 1185 \\ R & + & P & = & 42 + P \end{matrix}$$

$$6. \begin{matrix} M & & P \\ 3x - 5 & = & x - 5 + 14 \end{matrix}$$

$$7. \begin{matrix} A & & J \\ x + 15 + 10 & = & 2(x + 10) \end{matrix}$$

$$8. \begin{matrix} F \\ 3x - 5 = 2(2x - 8) \end{matrix}$$

Distance (10)

$$1. \begin{matrix} \xrightarrow{(x+4)^3} & \xleftarrow{(x)^3} \\ = 129m \end{matrix}$$

$$2. \begin{matrix} \xrightarrow{50(t-3)} & \xleftarrow{50(t)} \\ = 200m \end{matrix}$$

$$3. \begin{matrix} \xrightarrow{30(t)} \\ \xrightarrow{40(t-7)} \end{matrix}$$

$$4. \begin{matrix} \xrightarrow{4(12-t)} \\ \xleftarrow{16(t)} \end{matrix}$$

$$5. \begin{matrix} \xleftarrow{20(t)} & \xrightarrow{15(t+1)} \\ = 85m \end{matrix}$$

$$6. \begin{matrix} \xleftarrow{2R(5)} & \xrightarrow{3R(5)} \\ = 175000m \end{matrix}$$

$$7. \begin{matrix} \xrightarrow{R(4)} \\ \xrightarrow{R+15(2)} \end{matrix}$$

$$8. \begin{matrix} \xrightarrow{70(3-t)} \\ \xleftarrow{15(t)} \end{matrix}$$

Mixture & Solution (11)

$$1. \begin{matrix} 5(x) & + & 25(x) \\ = 240 \end{matrix}$$

$$2. \begin{matrix} 4(x) & + & 3(x) \\ = 6(25) \end{matrix}$$

$$3. \begin{matrix} 25(30-x) & + & 5(x) \\ = 550 \end{matrix}$$

$$4. \begin{matrix} 1(x) & + & 2(x) \\ = 240 \end{matrix}$$

$$5. \begin{matrix} (2) 30\% (x) & + & 80\% (x) \\ = 40\% (2+x) \end{matrix}$$

$$6. \begin{matrix} (5) 70\% (x) & + & 20\% (x) \\ = 60\% (5+x) \end{matrix}$$

$$7. \begin{matrix} (3) 60\% (x) & + & 0\% (x) \\ = 40\% (3+x) \end{matrix}$$

$$8. \begin{matrix} (6) 25\% (x) & + & 100\% (x) \\ = 60\% (6+x) \end{matrix}$$

DR & IR (12)

$$1. \frac{460}{2} = \frac{x}{5}$$

$$2. \frac{650}{3} = \frac{725}{x}$$

$$3. \frac{48}{20} = \frac{72}{x}$$

$$4. \frac{2}{1800} = \frac{3}{x}$$

$$5. 8(45) = x(60)$$

$$6. 105(4.4) = x(5.8)$$

$$7. 42(24) = x(28)$$

$$8. 8(125) = 5(x)$$

Two Var Prob (13)

$$3s + 2t = 69$$

$$2s + 4t = 66$$

$$6t + 2m = 440$$

$$4t + 4m = 640$$

$$2t = f$$

$$t + 3 = f$$

$$3R = W$$

$$R + 2 = W$$

$$xy = 45$$

$$2x + 1 = y$$

$$x^2 + y^2 = 13$$

$$x + 1 = y$$

$$x + y = 7$$

$$3x + 2 = y$$

$$x + y = 13$$

$$xy = 36$$

Motion & Digit (14)

$$2(s-c) = 12$$

$$1(s+c) = 12$$

$$3/2(s-w) = 190$$

$$3/2(s+w) = 540$$

$$1/2(s+w) = 90$$

$$1/2(s-w) = 12$$

$$1(s-c) = 6$$

$$1/4(s+c) = 3$$

$$t + u = 10$$

$$2u + 4 = t$$

$$t + 6 = u$$

$$10t + u + 4 = 25$$

$$t + u = 6$$

$$10u + t + 18 = 10t + 4$$

$$2t = u$$

$$10t + u + 9 = 10t + t$$

Max & Area (15)

$$(2x) \cdot (12-x) = P$$

$$-6T^2 + 4PT = H$$

$$(40-2x)(x) = A$$

$$(600-20x)(3+x) = M$$

$$(x+3) \cdot (x) = 144t^2$$

$$(x) \cdot (2x) = 164t^2$$

$$(x-3) \cdot (2x) = 564t^2$$

$$(3x-2) \cdot (x) = 654t^2$$

Volume & Area (16)

$$\pi(2x-1)^2 = \pi(x^2) + 33\pi$$

$$(2x+3)(x) = (2x)(x) + 15$$

$$\frac{4}{3}\pi(2x)^3 = \frac{4}{3}\pi(x)^3 + \frac{7}{4}\pi$$

$$(x+2)^3 = (x)^3 + 9x$$

$$\pi(2x)^2 = \pi(x)^2 + 96\pi$$

$$(3x)(x) = (3x)(x-2) + 42$$

$$\pi(2x)(x^2) = \pi(x)^2(x) + 9\pi$$

$$x(x)(x^2) = (x)(x)(2x) + 24$$

Big = Little +