

Date: 10.31.18

Word problems :

$$\begin{array}{r} 18. \textcircled{a} \quad 3x = 2x + 7 \\ \quad \quad -2x \quad -2x \\ \hline \quad \quad x = 7 \end{array}$$

$$\begin{array}{r} 18. \textcircled{b} \quad 3x = 2x - 7 \\ \quad \quad -2x \quad -2x \\ \hline \quad \quad x = -7 \end{array}$$

$$19. \textcircled{a} \quad \quad \quad x \quad \quad x+2 \quad \quad x+4$$

$$3(x+4) = 76 + x + x + 2$$

$$\Rightarrow 3x + 12 = 78 + 2x$$

$$\begin{array}{r} -2x \quad \quad \quad -2x \\ \hline \end{array}$$

$$x + 12 = 78$$

$$\begin{array}{r} -12 \quad \quad -12 \\ \hline \end{array}$$

$$x = 66$$

1st integer = 66 ; 2nd = 66 + 2 = 68 ; 3rd = 66 + 4 = 70

$$19. \textcircled{b} \quad x \quad x+1 \quad x+2$$

$$10x = 213 + x + 1 + x + 2$$

$$10x = 216 + 2x$$

$$-2x \quad -2x$$

$$\frac{8x}{8} = \frac{216}{8}$$

$$\therefore x = 27$$

$$2^{\text{nd}} \text{ integer} = 27 + 1 = 28; \quad 3^{\text{rd}} \text{ integer} = 27 + 2 = 29$$

Distance formula, $D = RT$

20. \textcircled{a}	w	R
	D	D
	x	$x-3$
	2.5	3

$$D = 2.5x \quad D = 3(x-3)$$

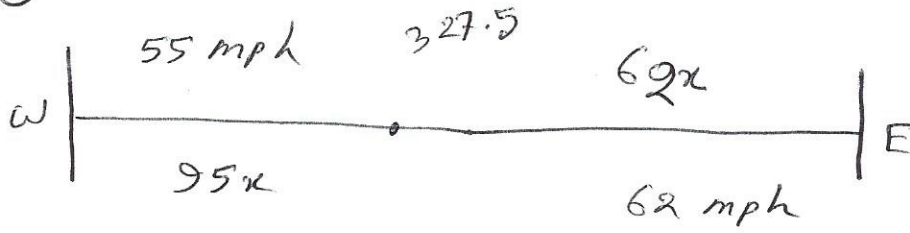
$$\therefore 2.5x = 3(x-3) \quad \text{for } w, \text{ it's } 18 \text{ mph}$$

$$\Rightarrow 2.5x = 3x - 9 \quad \text{for } w, \text{ it's } (18-3)$$

$$\Rightarrow 9 = 0.5x \quad = 15 \text{ mph}$$

$$\Rightarrow \frac{0.5x}{0.5} = \frac{9}{0.5} \quad \therefore x = 18$$

20. (b)

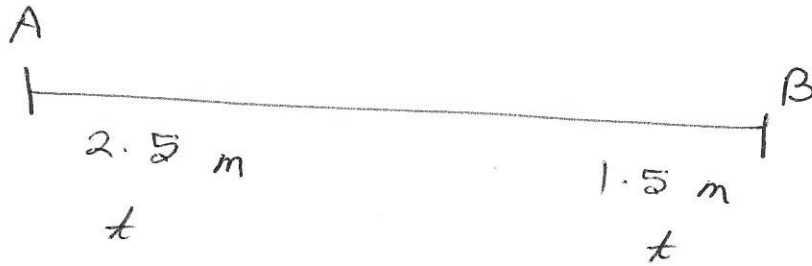


$$55x + 62x = 327.5$$

$$\frac{117x}{117} = \frac{327.5}{117}$$

$$\therefore x = 2.8 \text{ hr.}$$

20. (c)



$$D = 2.5x$$

$$D = 1.5x$$

$$2.5x + 1.5x = 9$$

$$\Rightarrow 4x = 9$$

$$\Rightarrow x = \frac{9}{4}$$

$$\therefore x = 2.25 \text{ hr.}$$

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$$1) \quad \begin{array}{r} ax - by = c \\ \quad \quad + by \quad \quad + by \end{array}$$

$$\frac{ax}{a} = \frac{c + by}{a}$$

$$\therefore x = \frac{c}{a} + \frac{by}{a}$$

$$2) \quad \begin{array}{r} ~~e+d~~ \quad cd = p/d \\ \Rightarrow c = p/d \end{array}$$

$$3) \quad \begin{array}{r} c + d = p \\ \quad -d \quad -d \\ \hline c = p - d \end{array}$$

$$4) \quad \begin{array}{r} 7x + xy = 18 \\ -7x \quad -7x \end{array}$$

$$\Rightarrow \frac{-xy}{x} = \frac{18 - 7x}{x}$$

$$\Rightarrow y = 18/x - 7$$