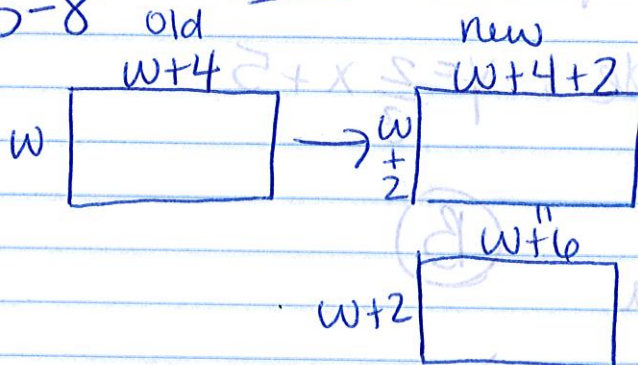


EOC

5-8

⑤



$$(w+2)(w+6)$$

$$w^2 + 6w + 2w + 12$$

① $N = w^2 + 8w + 12$

⑥

$t = \text{Sharn's time}$
 $t - 20 = \text{Curtis' times}$

$$5t = 6(t - 20)$$

$$5t = 6t - 120$$

$$\begin{array}{r} -6t \quad -6t \\ \hline -t = -120 \\ \quad \quad -1 \end{array}$$

$t = 120 \text{ seconds}$

candy drinks

⑦ $\begin{cases} 60x + 110y = 265 \\ 120x + 90y = 270 \end{cases} \rightarrow \begin{cases} -120x - 220y = -530 \\ 120x + 90y = 270 \end{cases}$

$$\begin{array}{r} -130y = -260 \\ \hline y = 2 \end{array}$$

Plug in y.

$$120x + 90y = 270$$

$$120x + 90(2) = 270$$

$$120x + 180 = 270$$

$$\begin{array}{r} -180 \quad -180 \\ \hline 120x = 90 \end{array}$$

$$\frac{120x}{120} = \frac{90}{120}$$

$$x = \frac{9}{12} \div 3 = \frac{3}{4} = \boxed{.75}$$

- ⑧ Integer 1: x ← smallest
 Integer 2: $x+1$
 Integer 3: $x+2$ ← largest

Product of smaller two = 5 less than 5 times the largest

$$\begin{array}{l} \swarrow \downarrow \searrow \\ x(x+1) \\ x^2+x \end{array}$$

$$\begin{array}{l} \swarrow \downarrow \searrow \\ = 5(x+2)-5 \\ = 5x+10-5 \end{array}$$

$$x^2+x = 5x+5$$

$$\begin{array}{r} -5x \quad -5x \\ \hline x^2-4x = 5 \end{array}$$

$$\begin{array}{r} -5 \quad 5 \\ \hline x^2-4x-5 = 0 \end{array}$$

← solve for x .
 * set equal to 0/y.

| M | A |
|-------|-------|
| -5 | -4 |
| 1, -5 | 1, -5 |

$$x^2-4x-5=0$$

$$x^2+1x-5x-5=0$$

$$x(x+1)-5(x+1)=0$$

$$(x-5)(x+1)=0$$

← set equal to zero + solve.

$$\begin{array}{l} x-5=0 \\ +5 \quad +5 \\ \hline x=5 \end{array}$$

↑
positive

$$\begin{array}{l} x+1=0 \\ -1 \quad -1 \\ \hline x=-1 \end{array}$$

↑
negative, so not an answer

5, 6, 7

Check Answer
smaller

$$5 \cdot 6 = 5(7) - 5$$

$$30 = 35 - 5$$

$$30 = 35 - 5$$

$$30 = 30 \checkmark$$

larger
 ↓