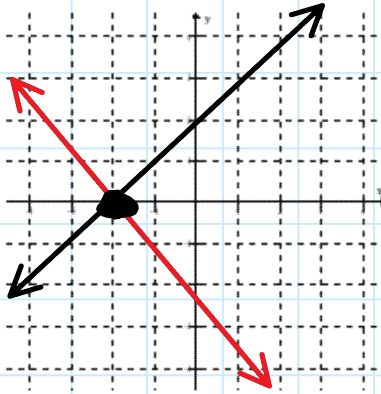
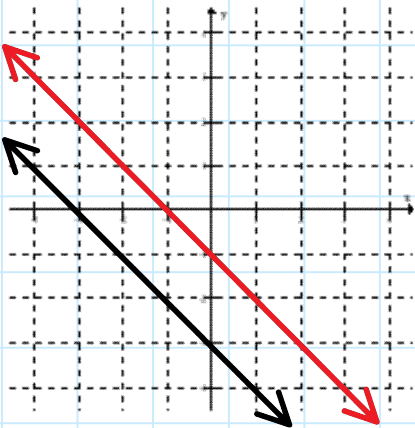


a)



$(-2, 0)$ 1 INT.
 $m \neq m$

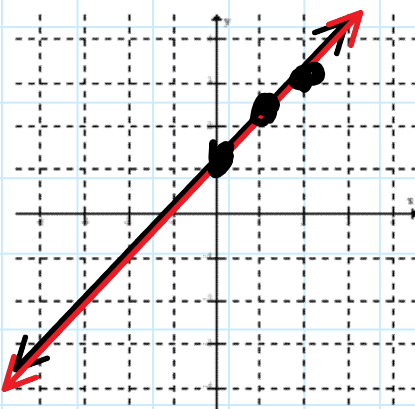
b)



PARALLEL

$m = m$, 0 INT.

c)



$m = m$

∞ INT.

2 a) ^{2,4}
(2,3)

$$y = x + 1$$

$$(3) = (2) + 1$$

$$3 = 3 \checkmark$$

ON LINE.

$$y = -2x + 4$$

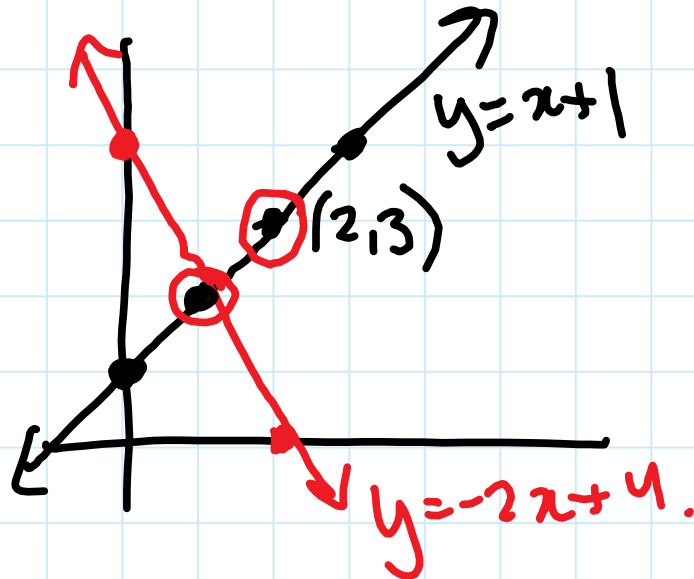
$$3 \neq -2(2) + 4$$

$$3 \neq -4 + 4$$

$$3 \neq 0$$

NOT ONLINE.

NOT INT! (INTERSECTION)



2a) ^{x, y}
 (-2, 1)

$$y - x = 3$$

$$(1) - (-2) = 3$$

$$1 + 2 = 3$$

$$3 = 3 \checkmark$$

ON LINE

$$y + 5 + 3x = 0$$

$$(1) + 5 + 3(-2) = 0$$

$$6 - 6 = 0$$

$$0 = 0 \checkmark$$

ON LINE.

INT \checkmark

$$y - x = 3$$

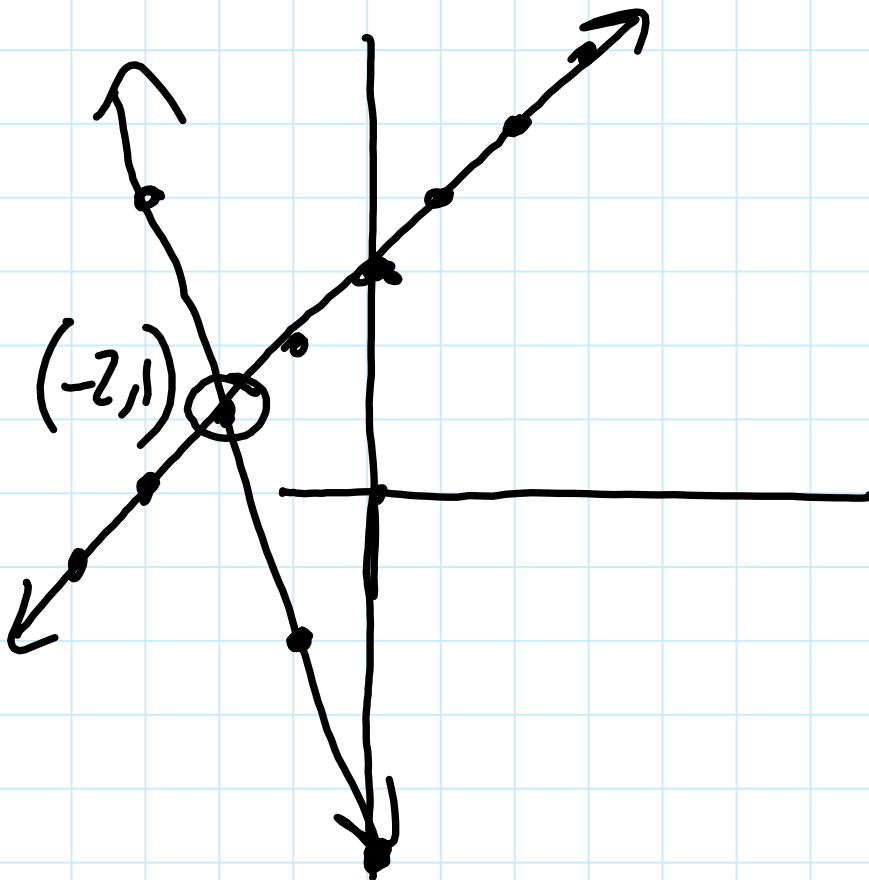
$$\downarrow + x \quad + x$$

$$y = x + 3$$

$$y + 5 + 3x = 0$$

$$\downarrow - 5 \quad - 3x \quad - 5 - 3x$$

$$y = -3x - 5$$



2c) $(2, 1)$

$$3x + 2y = 6$$

$$3(2) + 2(1) \neq 6$$

$$6 + 2 \neq 6$$

$$8 \neq 6$$

$$x - 3 = y$$

$$2 - 3 \neq 1$$

$$-1 \neq 1$$

NOT ON LINE

NOT ON LINE.

NOT INT.

| x | y |
|---|---|
| 0 | 3 |
| 2 | 0 |

$$3x + 2y = 6$$

$$3(0) + 2y = 6$$

$$\frac{2y}{2} = \frac{6}{2}$$

$$y = 3$$

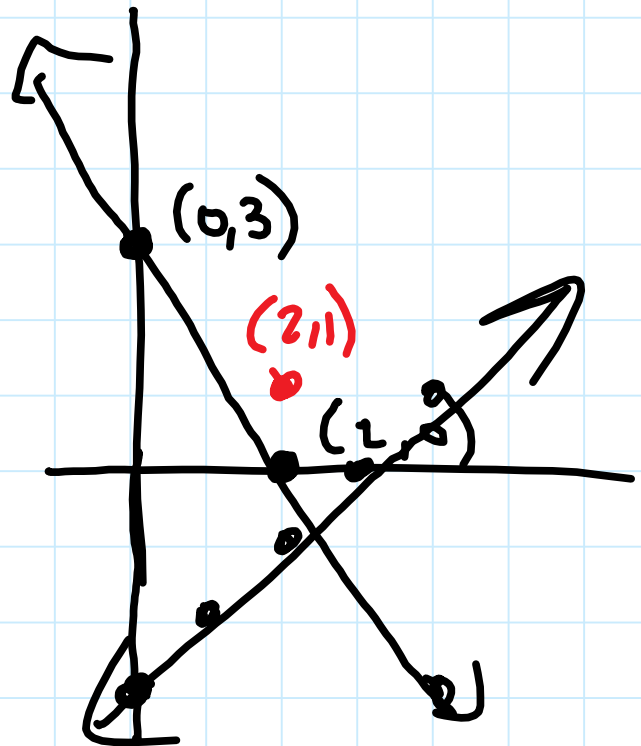
$$y = x - 3$$

$$3x + 2y = 6$$

$$3x + 2(0) = 6$$

$$\frac{3x}{3} = \frac{6}{3}$$

$$x = 2$$



3a) $y = 2x - 3$ $y = x + 4$ $m \neq m$ 1 INT

b) $y = 3x - 8$ $y = 3x + 2$ $m = m$ 0 INT

c) $y = x + 1$ $y = x + 1$ $m = m$ ∞ INT

d) $2x - y - 3 = 0$ $x - y + 4 = 0$ 1 INT.

$$\begin{array}{r} +y \quad +y \\ 2x - 3 = y \\ y = 2x - 3 \end{array}$$

$$\begin{array}{r} -x \quad -4 \quad -x - 4 \\ -y = -x - 4 \\ \frac{-y}{-1} = \frac{-x}{-1} \frac{-4}{-1} \\ y = x + 4 \end{array}$$

e) $6x - 2y = 16$

$$\begin{array}{r} \frac{6x}{2} - \frac{16}{2} = \frac{2y}{2} \\ 3x - 8 = y \end{array}$$

$6x - 2y + 4 = 0$ 0 INT.

$$\begin{array}{r} \frac{6x}{2} + \frac{4}{2} = \frac{2y}{2} \\ 3x + 2 = y \end{array}$$

4a) $y = \underline{x+1}$ $y = \underline{-2x+4}$

$$\begin{array}{r} x+1 = -2x+4 \\ +2x \quad +2x \end{array}$$

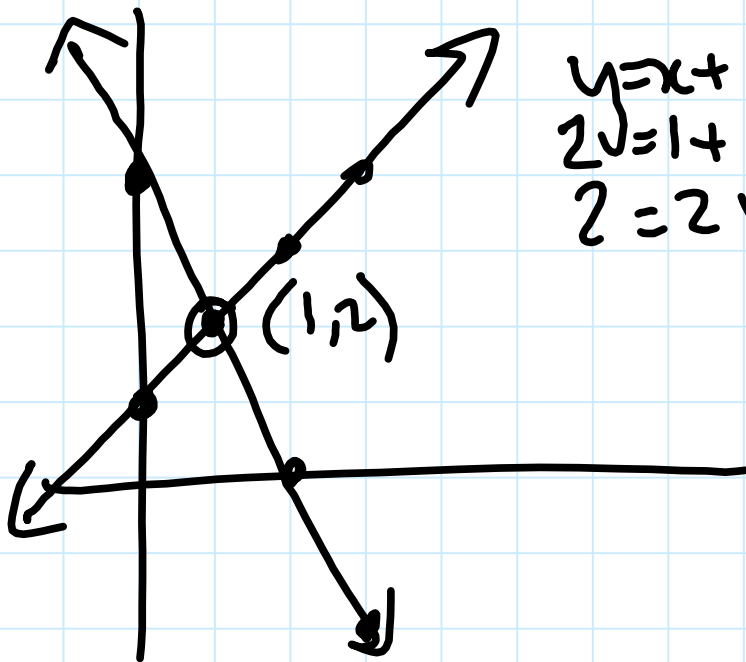
$$3x+1=4$$

$$\begin{array}{r} -1 \quad -1 \\ 3x=3 \\ \hline 3 \quad 3 \end{array}$$

$$x=1$$

$$\begin{array}{l} y=x+1 \\ y=(1)+1 \\ y=2 \end{array}$$

$$(1,2)$$



$$\begin{array}{l} y=x+1 \\ 2=1+1 \\ 2=2 \checkmark \end{array}$$

$$\begin{array}{l} y=-2x+4 \\ 2=-2(1)+4 \\ 2=-2+4 \\ 2=2 \checkmark \end{array}$$

4b) $x = (3 - y)$ $2y - 2(x) = 10$

$x = 3 - (y)$
 $x = -1$

$(-1, 4)$ ✓

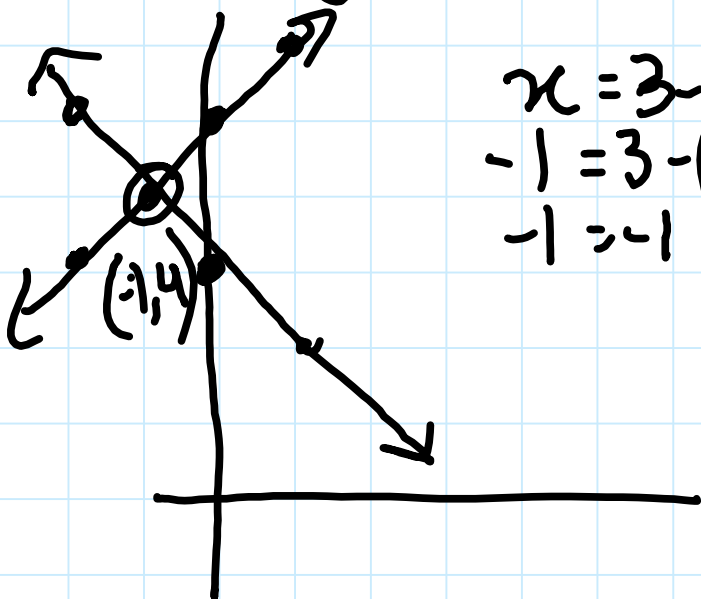
$2y - 2(3 - y) = 10$
 $2y - 6 + 2y = 10$
 $4y - 6 = 10$

$+6 +6$
 $4y = 16$
 $\frac{4y}{4} = \frac{16}{4}$

$y = 4$

$x = 3 - y$
 $+y \quad +y$
 $x + y = 3$
 $-x \quad -x$
 $y = -x + 3$

$2y - 2x = 10$
 $\frac{2y}{2} = \frac{2x + 10}{2}$
 $y = x + 5$



$x = 3 - y$
 $-1 = 3 - (4)$
 $-1 = -1$ ✓

$2y - 2x = 10$
 $2(4) - 2(-1) = 10$
 $8 + 2 = 10$
 $10 = 10$ ✓

4c) $2(y) = 2x - 6$ $y = (x - 3)$

$$2(x-3) = 2x - 6$$

$$2x - 6 = 2x - 6$$

$$\begin{array}{r} -2x \quad -2x \\ \hline -6 = -6 \\ +6 \quad +6 \\ \hline 0 = 0 \end{array}$$

$$\begin{array}{r} -6 = -6 \\ +6 \quad +6 \\ \hline 0 = 0 \end{array}$$

=

SAME LINE. ∞ INT, ✓

= # ∞ INT

$$\frac{2y}{2} = \frac{2x-6}{2}$$

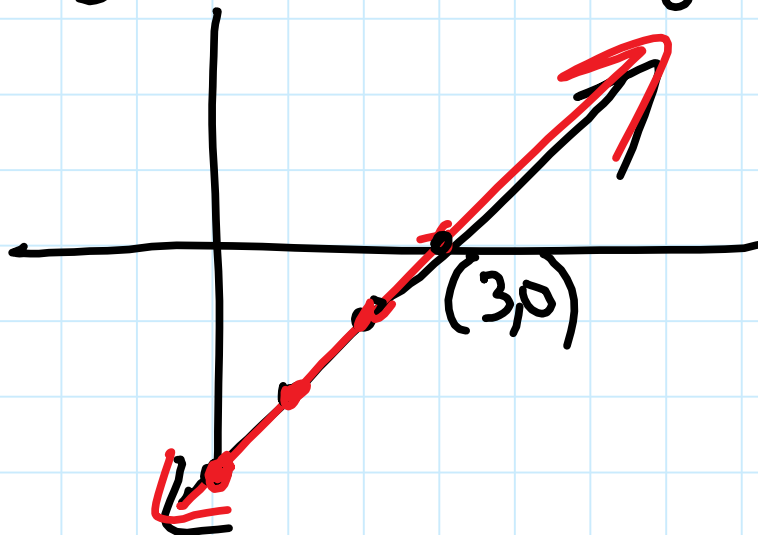
$$y = x - 3$$

$$y = x - 3$$

$$y = x - 3$$

$$0 = 3 - 3$$

$$0 = 0$$



$$4d) \left(\frac{1}{2}x+1\right)=y$$

$$\frac{1}{2}(1)+1=y$$

$$\frac{1}{2}+1=y$$

$$\frac{1}{2}+\frac{1 \times 2}{2}=y$$

$$\frac{1}{2}+\frac{2}{2}=y$$

$$\left(\frac{3}{2}=y\right)$$

$$2y+x=4$$

$$2\left(\frac{1}{2}x+1\right)+x=4$$

$$1x+2+x=4$$

$$2x+2=4$$

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

$$x=1$$

$$\left(1, \frac{3}{2}\right)$$

$$\frac{1}{2}x+1=y$$

$$\frac{1}{2}(1)+1=\frac{3}{2}$$

$$\frac{1}{2}+1=\frac{3}{2}$$

$$\frac{3}{2}=\frac{3}{2} \checkmark$$

$$2y+x=4$$

$$2\left(\frac{3}{2}\right)+1=4$$

$$3+1=4$$

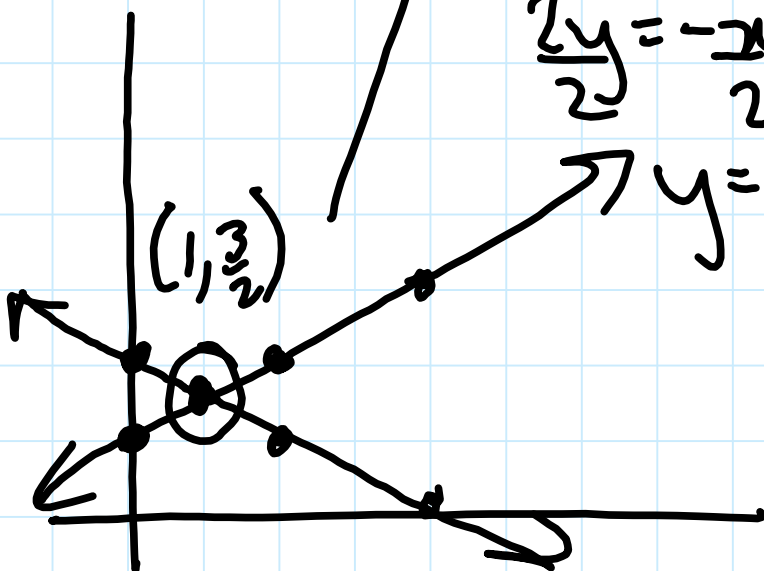
$$4=4 \checkmark$$

$$\frac{1}{2}x+1=y$$

$$2y+x=4$$

$$\frac{2y}{2}=\frac{-x+4}{2}$$

$$y=-\frac{1}{2}x+2$$



4e) $y = \underline{2x+5}$ $y = \underline{2x+1}$ $m=m$
 $0 \neq 1$

$$\begin{array}{r} 2x+5 = 2x+1 \\ -2x \quad -2x \\ \hline 5 \neq 1 \end{array}$$

\neq # 0 INT.
$=$ # $\infty \text{ INT.}$



$$5a) \begin{array}{r} 2y = x - 2 \\ - (y = x - 3) \\ \hline y = 1 \end{array}$$

$$y = x - 3 \quad y = x \pm 3$$

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

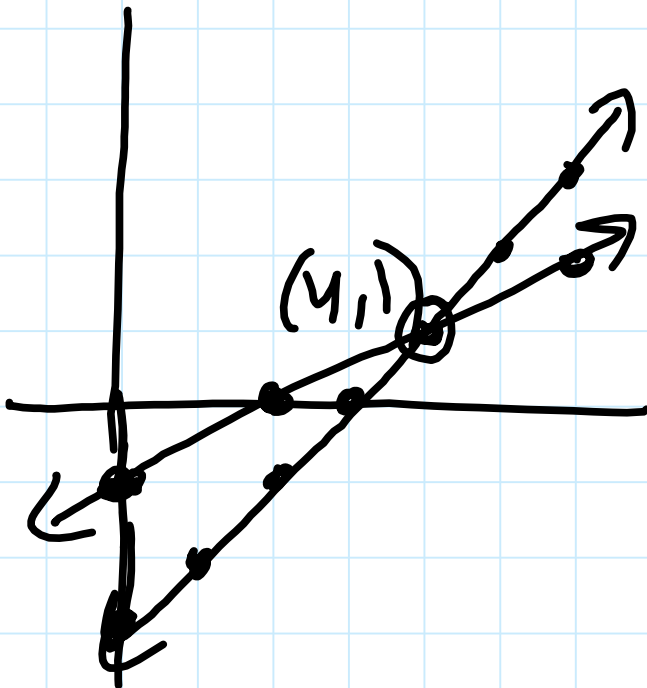
$$\begin{array}{r} 2y = x - 2 \\ \frac{2}{2} \frac{x}{2} \frac{-2}{2} \\ \hline y = \frac{1}{2}x - 1 \end{array}$$

$$\begin{array}{r} y = x - 3 \\ 1 = x - 3 \\ +3 \quad +3 \\ \hline x = 4 \end{array}$$

$$(4, 1) \checkmark$$

$$\begin{array}{r} 2y = x - 2 \\ 2(1) = 4 - 2 \\ 2 = 2 \checkmark \end{array}$$

$$\begin{array}{r} y = x - 3 \\ 1 = 4 - 3 \\ 1 = 1 \checkmark \end{array}$$



$$5b) \begin{array}{l} y+x=6 \\ + (y-x=4) \\ \hline \end{array}$$

$$\begin{array}{l} 2y=10 \\ \hline 2 \\ \hline y=5 \end{array}$$

$$\begin{array}{l} y-x=4 \\ x+(-x) \\ \hline x-x=0 \end{array}$$

$$\begin{array}{l} y+x=6 \\ 5+y+x=6 \\ -5 \quad -5 \\ \hline x=1 \end{array}$$

$$(1, 5)$$

$$\begin{array}{l} y+x=6 \\ 5+1=6 \\ 6=6 \checkmark \end{array}$$

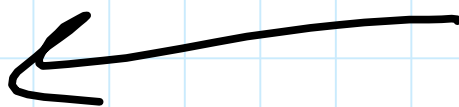
$$\begin{array}{l} y-x=4 \\ 5-(1)=4 \\ 4=4 \checkmark \end{array}$$

$$\begin{array}{r}
 5c) \quad y = -6x + 2 \\
 - (y = -4x) \\
 \hline
 0 = -2x + 2 \\
 -2 \qquad \qquad -2 \\
 -2 = -2x \\
 \frac{-2}{-2} = \frac{-2x}{-2} \\
 \boxed{x = 1}
 \end{array}$$

$$\begin{array}{r}
 y + 4x = 0 \\
 \quad -4x \quad -4x \\
 \hline
 y = -4x \\
 -6 - (-4) \\
 -6 + 4 = -2
 \end{array}$$

$$\begin{array}{r}
 y + 4x = 0 \\
 y + 4(1) = 0 \\
 y + 4 = 0 \\
 \quad -4 \quad -4 \\
 \hline
 \boxed{y = -4}
 \end{array}$$

$$\boxed{(1, -4)} \checkmark$$



$$\begin{array}{r}
 y = -6x + 2 \\
 -4 = -6(1) + 2 \\
 -4 = -6 + 2 \\
 -4 = -4 \checkmark
 \end{array}$$

$$\begin{array}{r}
 y + 4x = 0 \\
 -4 + 4(1) = 0 \\
 -4 + 4 = 0 \\
 0 = 0 \checkmark
 \end{array}$$

$$y = x + \#$$

$$\begin{array}{r}
 5d) \quad 2x - 3y = 2 \\
 - (2x + 4y = 16) \\
 \hline
 -7y = -14 \\
 \frac{-7}{-7} \quad \frac{-14}{-7} \\
 \hline
 y = 2
 \end{array}$$

$$\begin{array}{r}
 2x - 3y = 2 \\
 2x - 3(2) = 2 \\
 2x - 6 = 2 \\
 +6 \quad +6
 \end{array}$$

$$\begin{array}{r}
 2x = 8 \\
 \frac{2}{2} \quad \frac{8}{2} \\
 \hline
 x = 4
 \end{array}$$

$(4, 2)$

$$\begin{array}{r}
 (x + 2y = 8) \times 2 \\
 2x + 4y = 16
 \end{array}$$

$$x + y = 8$$

$$\begin{array}{r}
 -3 - +4 \\
 -3 - 4 = -7
 \end{array}$$

$$\begin{array}{r}
 2x - 3y = 2 \\
 2(4) - 3(2) = 2 \\
 8 - 6 = 2 \\
 2 = 2
 \end{array}$$

$$\begin{array}{r}
 x + 2y = 8 \\
 4 + 2(2) = 8 \\
 4 + 4 = 8 \\
 8 = 8 \quad \checkmark
 \end{array}$$

$$\begin{array}{r} 5e) \quad 3y + x = 4 \\ - (3y + 2x = 18) \\ \hline -x = -14 \\ \quad -1 \quad -1 \\ \hline x = 14 \end{array}$$

$$\begin{array}{l} 0.5y + \frac{x}{3} = 3 \\ \left(\frac{1}{2}y + \frac{x}{3} = 3 \right) \times LCD = 6 \\ \hline 3y + 2x = 18 \\ \frac{1}{2} \times \frac{3}{1} = 3 \\ \frac{1}{2} \times \frac{3}{2} = \frac{3}{4} \end{array}$$

$$\begin{array}{r} 3y + x = 4 \\ 3y + 14 = 4 \\ \hline -14 \quad -14 \\ \hline 3y = -10 \\ \frac{3y}{3} = \frac{-10}{3} \\ \hline y = \frac{-10}{3} \end{array}$$

$$\left(\begin{array}{c} 14 \\ -10 \\ 3 \end{array} \right)$$

5f) $(2x + 7y = 16) \cdot 3$

$(3x + 5y = 13) \cdot 2$

$$\begin{array}{r} 6x + 21y = 48 \\ - (6x + 10y = 26) \\ \hline \end{array}$$

$$\frac{11y}{11} = \frac{22}{11}$$

$y = 2$

$$\underline{6x} + 10y = 26$$

LCD 2,3

$$3x + 5y = 13$$

$$3x + 5(2) = 13$$

$$3x + 10 = 13$$

$$-10 \quad -10$$

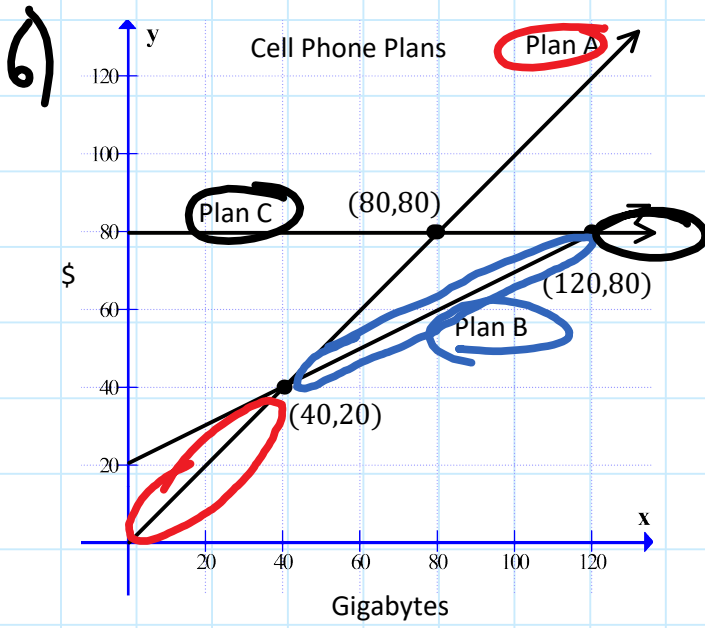
$$\underline{3x} = \underline{3}$$

$$\underline{3} \quad \underline{3}$$

$x = 1$

$(1, 2)$

M10 - 8/9.0 - Q6 Systems Review



7a) let $x = 1^{\text{st}} \#$
 let $2x - 1 = 2^{\text{nd}} \#$
 let $x + 4 = 3^{\text{rd}} \#$

$$x + (2x - 1) + (x + 4) = 67$$

$$4x + 3 = 67$$

$$\begin{array}{r} -3 \\ -3 \end{array}$$

$$\underline{4x} = \underline{64}$$

$$\begin{array}{r} 4 \\ 4 \end{array}$$

$$x = 16$$

1st # = 16
 2nd # = 31
 3rd # = 20
 67

$$16 \times 2 = 32 - 1 = 31$$

$$16 + 4 = 20$$

$$7b) \text{ let } x = 1\text{st} \# \\ \text{let } x+1 = 2\text{nd} \# \\ \text{let } x+2 = 3\text{rd} \#$$

$$x + (x+1) + (x+2) = 24$$

$$3x + 3 = 24$$

$$\underline{-3} \quad \underline{-3}$$

$$3x = 21$$

$$\underline{\quad} \quad \underline{\quad}$$

$$x = 7 \quad \checkmark$$

$$\begin{array}{r} 1\text{st} \# = 7 \\ 2\text{nd} \# = 8 \\ 3\text{rd} \# = 9 \\ \hline 24 \end{array}$$

7c) let $x = 1^{\text{st}} \#$
let $x+2 = 2^{\text{nd}} \#$

$$\begin{aligned} 3(x+2) - 5 &= 4(x) \\ 3x + 6 - 5 &= 4x \\ -3x & \qquad -3x \\ 1 &= x \end{aligned}$$

$1^{\text{st}} \# = 1$
 $2^{\text{nd}} \# = 3$

✓ $3(3) - 5 = 4(1)$
 $9 - 5 = 4$
 $4 = 4$

7d) let $a = 1^{\text{st}} \#$
 let $b = 2^{\text{nd}} \#$

$$\begin{array}{r} a + b = 9 \\ -b \quad -b \\ \hline a = 9 - b \end{array}$$

$$\begin{array}{r} a = 9 - (-11) \\ a = 9 + 11 \\ \hline a = 20 \end{array}$$

$$(a) - b = 31$$

$$\begin{array}{r} (a - b) - b = 31 \\ 9 - 2b = 31 \end{array}$$

$$\begin{array}{r} 9 \quad \quad -9 \\ -2b = 22 \end{array}$$

$$\begin{array}{r} -2 \quad -2 \\ \hline b = -11 \end{array}$$

$$\begin{array}{r} a + b = 9 \\ 20 + (-11) = 9 \\ 20 - 11 = 9 \\ \hline 9 = 9 \end{array}$$

$$\begin{array}{r} a - b = 31 \\ 20 - (-11) = 31 \\ 20 + 11 = 31 \\ \hline 31 = 31 \end{array}$$

$1^{\text{st}} \# = 20$
 $2^{\text{nd}} \# = -11$

8a) let $m = \text{MARK'S AGE}$

$$3m - 4 = 2m + 14$$

$$\begin{array}{r} -2m \\ m - 4 = 14 \end{array}$$

$$m - 4 = 14$$

$$\begin{array}{r} +4 +4 \\ \hline \end{array}$$

✓ $m = 18$ MARK IS 18 YEARS OLD .

$$3 \times 18 = 54 - 4 = 50$$

$$2 \times 18 = 36 + 14 = 50$$

8b) let $N = \text{NICOLE'S AGE NOW}$.

| NOW | THEN |
|-----|-------|
| N | $N-3$ |

$$3(N-3) = 2(N)$$

$$3N - 9 = 2N$$

$$-2N \quad -2N$$

$$N - 9 = 0$$

$$+9 \quad +9$$

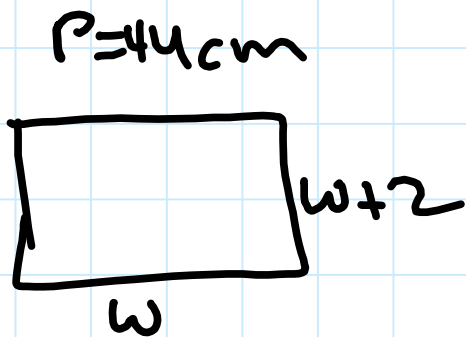
$$\checkmark \quad N = 9$$

NICOLE IS 9 YEARS OLD NOW.

$$3(6) = 18$$

$$2(9) = 18$$

9) a)

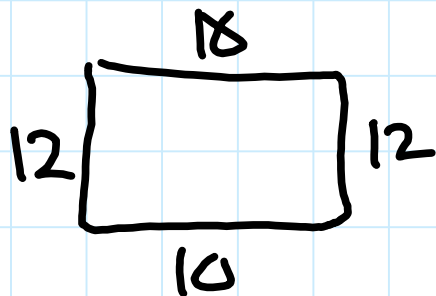


$$w + w + 2 + w + w + 2 = 44$$

$$4w + 4 = 44$$

$$\frac{4w}{4} = \frac{40}{4}$$

$$w = 10 \text{ cm} \quad \checkmark$$



$$10 + 10 + 12 + 12 = 44 \quad L = 12 \text{ cm}$$

10) let D = DOLLARS IN BANK
 let d = # of days.

$$D = 2 + 0.5d$$

$$y = b + mx$$

$$D = 11 - 1d$$

$$(2 + \frac{1}{2}d = 11 - d) \times 2$$

$$4 + 1d = 22 - 2d$$

$$+ 2d \quad + 2d$$

$$4 + 3d = 22$$

$$- 4 \quad - 4$$

$$3d = 18$$

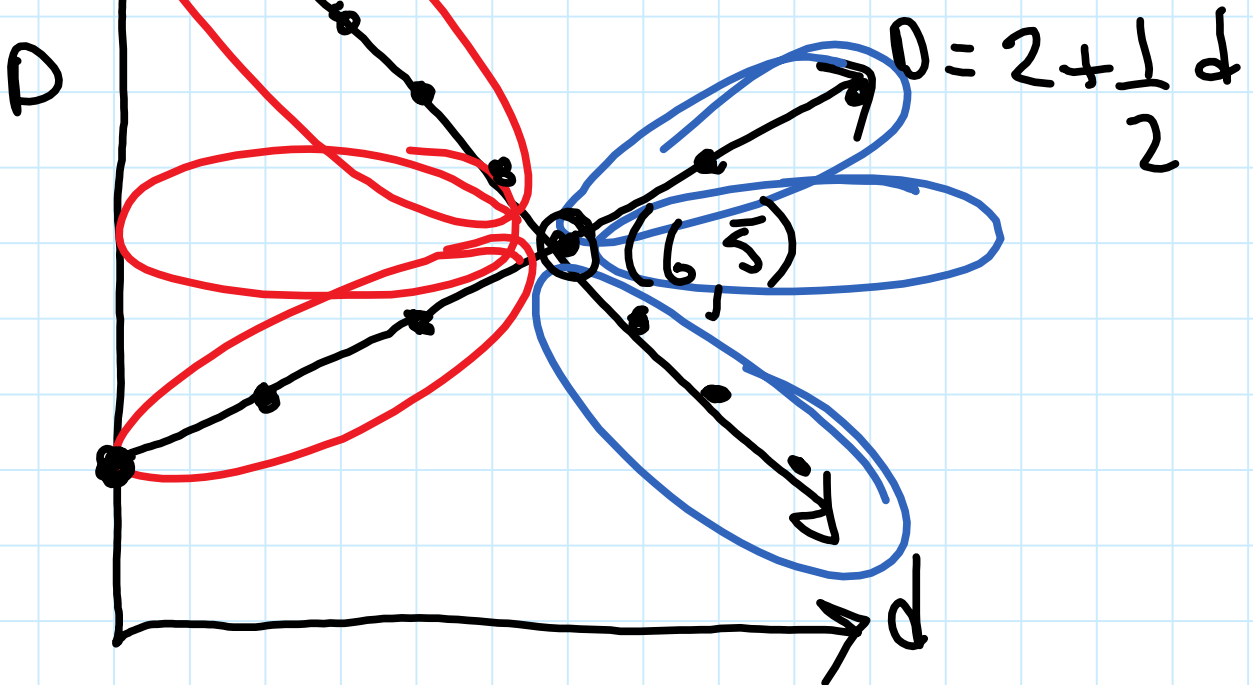
$$d = 6$$

$$D = 11 - 1d$$

$$D = 11 - (6)$$

$$D = 5$$

IN FIVE DAYS
 KEIRA & BRIAN WILL
 BOTH HAVE 6 DOLLARS
 IN THE BANK.



1) let $g = \#$ of g's
 let $C = \text{current E. (CELL COMPANY)}$

$$C = 1g \quad C = 20 + \frac{1}{2}g$$

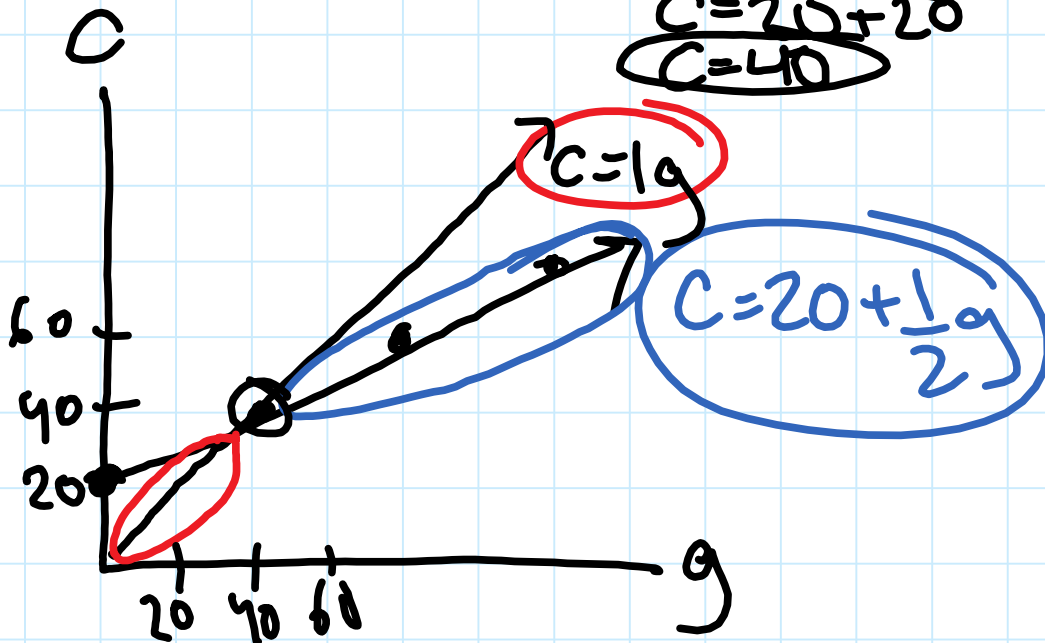
$$1g = 20 + \frac{1}{2}g$$

$$\cancel{2} \times \left(\frac{1}{2}g = 20 \right) \times 2$$

$g = 40$

$$\begin{array}{r} 2 \times \frac{1}{2} - \frac{1}{2} \\ 2 \times 1 - \frac{1}{2} \\ \frac{2}{2} - \frac{1}{2} = \frac{1}{2} \end{array}$$

$$\begin{aligned} C &= 20 + \frac{1}{2}g \\ C &= 20 + \frac{1}{2}(40) \\ C &= 20 + 20 \\ C &= 40 \end{aligned}$$



12b) LET $Q = \#$ OF QUARTERS
 " $D = \#$ " DIMES

$$\begin{array}{r} Q + D = 22 \\ - D \quad - D \\ \hline \end{array}$$

$$Q = (22 - D)$$

$$0.25(Q) + 0.10D = 5.20$$

$$\begin{array}{r} 0.25(22 - D) + 0.10D = 5.2 \\ 5.5 - 0.25D + 0.10D = 5.2 \\ - 5.5 \end{array}$$

$$\begin{array}{l} Q = 22 - 2 \\ \textcircled{Q = 20} \checkmark \end{array}$$

$$\begin{array}{r} -0.15D = -0.3 \\ -0.15 \quad -0.15 \\ \hline \textcircled{D = 2} \checkmark \end{array}$$

$$\begin{array}{r} 20 \times 0.25 = 5 \\ 2 \times 0.10 = \underline{0.20} \\ \hline \$5.20 \end{array}$$

13a) let $a = \# \text{ of } L (30\% / b)$
 " $b = \# \text{ of } L (70\% / b)$

$$a + b = 50$$

$$0.3a + 0.7b = 0.4(50)$$

$$\begin{array}{r} -a \\ b = 50 - a \end{array}$$

$$0.3a + 0.7(50 - a) = 20$$

$$\begin{array}{r} 0.3a + 35 - 0.7a = 20 \\ -35 \qquad \qquad \qquad -35 \end{array}$$

↓

$$b = 50 - 37.5$$

$$b = 12.5$$

$$0.3a - 0.7a = -15$$

$$\begin{array}{r} -0.4a = -15 \end{array}$$

$$\begin{array}{r} -0.4 \qquad \qquad -0.4 \end{array}$$

$$a = 37.5$$

13b) let $a = \# \text{ kg } (\$1.20)$
 " $b = \# \text{ kg } (\$1.80)$

$$a + b = 12$$

$$\begin{array}{r} -b \\ -b \end{array}$$

$$a = (12 - b)$$



$$a = 12 - 5$$

$$a = 7$$

$$7 + 5 = 12 \checkmark$$

$$7 \times 1.2 + 5 \times 1.8 = 17.4 \checkmark$$

$$1.2(a) + 1.8b = 17.40$$

$$1.2(12 - b) + 1.8b = 17.40$$

$$14.4 - 1.2b + 1.8b = 17.40$$

$$-14.4$$

$$-14.4$$

$$\frac{0.6b}{0.6} = \frac{3}{0.6}$$

$$b = 5$$

$$b = 5$$

14a) let $a =$ amount in 12% bond
 " $b =$ " " 8% "

$$a + b = 2800 \quad 0.12a + 0.08b = 288$$

$$-b \quad -b$$

$$a = (2800 - b) \quad 0.12(2800 - b) + 0.08b = 288$$

$$336 - 0.12b + 0.08b = 288$$

$$a = 2800 - b \quad -336 \quad -336$$

$$\boxed{a = 1600} \quad \checkmark$$

$$-0.04b = -48$$

$$\frac{-0.04}{-0.04} \quad \frac{-48}{-0.04}$$

$$\boxed{b = 1200} \quad \checkmark$$

$$1600 + 1200 = 2800 \quad \checkmark$$

$$1600 \times 0.12 + 1200 \times 0.08 = 288 \quad \checkmark$$

14b) let a = amount of 6%
 " b = " " 8%

$$a + b = 10 \quad 0.06a + 0.08b = \underline{0.074(10)}$$

$$a = (10 - b) \quad \begin{array}{r} + 0.08b = 0.74 \\ 0.6 - 0.06b + 0.08b = 0.74 \\ - 0.02b = 0.14 \end{array}$$

$$a = 10 - 7$$

$$\boxed{a = 3}$$

$$\begin{array}{r} 0.02b = 0.14 \\ \underline{0.02} \quad \underline{0.02} \\ b = 7 \end{array}$$

$$\boxed{b = 7}$$

$$3 + 7 = 10 \quad \checkmark$$

$$0.06(3) + 0.08(7) = 0.074(10)$$

$$0.74 = 0.74$$

15) let $a = \#$ OF ADULT TICKETS
 " $b = \#$ " CHILD " "

$$a + b = 100 \quad 12a + 6b = 966$$

$$\begin{array}{r} -b \quad -b \\ a = (100 - b) \end{array}$$

$$12(100 - b) + 6b = 966$$

$$1200 - 12b + 6b = 966$$

$$a = 100 - 39$$

$$-1200$$

$$-1200$$

$$a = 61$$

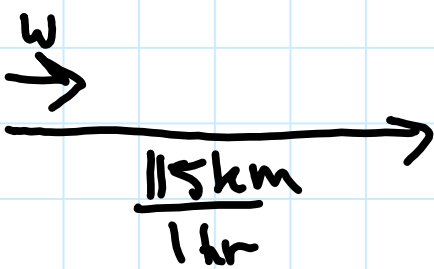
$$\begin{array}{r} -6b = -234 \\ -6 \quad -6 \end{array}$$

$$39 + 61 = 100$$

$$b = 39$$

$$61 \times 12 + 39 \times 6 = 966 \checkmark$$

(6a)



let v = speed of plane (still air)
 let w = WIND SPEED

$$v + w = 115$$

$$-w \quad -w$$

$$v = (115 - w)$$

$$v = 115 - 15$$

$$v = 100 \text{ km/hr}$$

h

$$(v) - w = 85$$

$$\{115 - w\} - w = 85$$

$$-115$$

$$-115$$

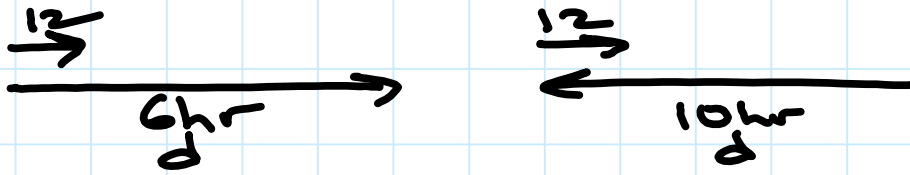
$$-2w = -30$$

$$-2 \quad -2$$

$$w = 15 \text{ km/hr}$$

h

16b)



let v = boat speed (still AIR)
 " d = distance traveled.

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

$$(v + 12 = \frac{d}{6}) \times 6$$

$$6v + 72 = d$$

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

$$(v - 12 = \frac{d}{10}) \times 10$$

$$10v - 120 = d$$

$$6v + 72 = 10v - 120$$

$$-6v \quad -6v$$

$$72 = 4v - 120$$

$$+120 \quad +120$$

$$4v = 192$$

$$\frac{4}{4} \quad \frac{192}{4}$$

$$v = 48 \quad \checkmark$$

$$v - 12 = \frac{d}{10}$$

$$48 - 12 = \frac{d}{10}$$

$$10 \times 36 = \frac{d}{10} \times 10$$

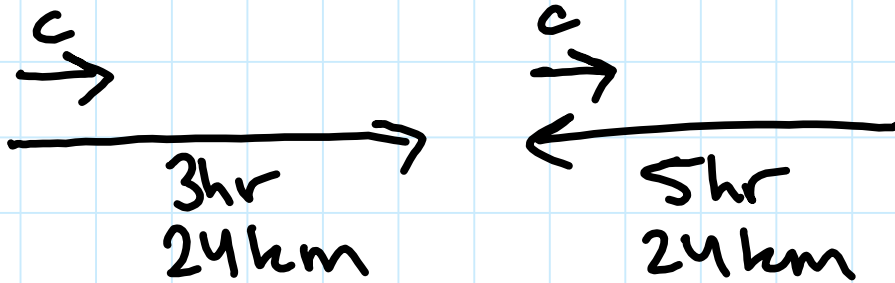
$$d = 360 \quad \checkmark$$

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

$$60 = \frac{360}{6} \quad \checkmark$$

$$36 = \frac{360}{10} \quad \checkmark$$

16c)



let v = boat speed (still water)
 " c = current "

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

$$v + c = \frac{24}{3}$$

$$v + c = 8$$

$$v = (8 - c)$$

$$v = 8 - 1.6$$

$$v = 6.4 \frac{\text{km}}{\text{h}}$$

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

$$v - c = \frac{24}{5}$$

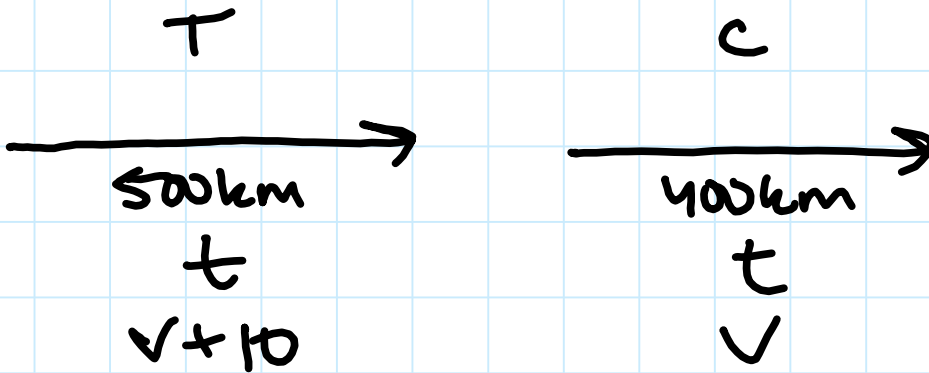
$$v - c = 4.8$$

$$8 - c - c = 4.8$$

$$\frac{-2c}{-2} = \frac{-3.2}{-2}$$

$$c = 1.6 \frac{\text{km}}{\text{h}}$$

(7)



let $t = \text{time}$
 let $v = \text{car's speed}$

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

$$(v+10) = \frac{500}{t}$$

$$\left(\frac{400}{t} + 10 = \frac{500}{t} \right) \times t$$

$$400 + 10t = 500$$

$$-400$$

$$-400$$

$$10t = 100$$

$$\frac{10}{10} \quad \frac{10}{10}$$

$$t = 10 \text{ hr}$$

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

$$v = \frac{400}{t}$$

$$v = \frac{400}{10}$$

$$10$$

$$v = 40 \text{ km/hr}$$

18) let $h = \text{height (m)}$
 " $t = \text{time (s)}$

$$h = 800 - 10t$$

$$h = 100$$

$$100 = 800 - 10t$$

$$-800 \quad -800$$

$$-700 = -10t$$

$$\frac{-700}{-10} = \frac{-10t}{-10}$$

$$t = 70 \text{ s}$$

| t | h |
|-----|-----|
| 0 | 800 |
| 1 | 790 |
| 2 | 780 |
| ... | ... |
| 70 | 100 |

19a) let $p = \#$ of pizzas
 " $C = \text{cost}$ " "

(p, C)

$(100, 550)$ $(200, 1050)$

$$m = \frac{1050 - 550}{200 - 100}$$

$$m = \frac{500}{100}$$

$$m = 5$$

$$y = mx + b$$

$$C = mp + b$$

$$C = 5p + b$$

$$550 = 5(100) + b$$

$$550 = 500 + b$$

$$-500 \quad -500$$

$$b = 50$$

$(100, 550)$

$$C = 5p + 50$$



\$5/PIZZA

RENT STORE = \$50.