$(-7,-7)$ and $(-4,14)$

$(y_2-y_1)=m(x_2-x_1)$

$14-(-7)=m(-4-(-7))$

$14+7 \quad -4+7$

$21 = m(3)$

$\frac{21}{3}=\frac{3m}{3}$

$7=m$

$\boxed{m=7}$

$-3x+7y=5x+2y$

$+3x \quad -2y \quad +3x \quad -2y$

$\frac{5y}{5}=\frac{8x}{5}$

$y=\frac{8}{5}x$

$x=-5$

$y=\frac{8}{5}(-5)$

$\boxed{y=-8}$

$(-9,-6)$ and $(3,-9)$

$(y_2-y_1)=m(x_2-x_1)$

$-9-(-6)=m(3-(-9))$

$-9+6=m(3+9)$

$\frac{-3}{12}=\frac{m(12)}{12}$

$\boxed{m=-\frac{1}{4}}$

$y = 8x + 3$

$(1, 11)$

$11 = 8(1) + 3$

$11 = 8 + 3$

$11 = 11$ ✓

$(-1, -5)$

$-5 = 8(-1) + 3$

$-5 = -8 + 3$

$-5 = -5$ ✓

$-3x + 5y = 2x + 3y$

$+3x \qquad +3x$

$5y = 5x + 3y$

$-3y \qquad -3y$

$2y = 5x$

$(2, 4)$

$2(4) = 5(2)$

$8 \neq 10$ X

$(3, 3)$

$2(3) = 5(3)$

$6 \neq 15$

$(-4, 2)$ and $(-3, 5)$

$(y_2 - y_1) = m(x_2 - x_1)$

$5 - 2 = m(-3 - (-4))$

$3 = m(-3 + 4)$

$3 = m(1)$

$\frac{3}{1} = \frac{m(1)}{1}$

$3 = m$

$(-2,-6)$ and $(2,2)$

$(y_2-y_1)=m(x_2-x_1)$

$(2-(-6))=m(2-(-2))$

$2+6=m(2+2)$

$\frac{8}{4}=\frac{m(4)}{4}$

$\boxed{m=2}$

$(0,-1)$ and $(4,2)$

$(y_2-y_1)=m(x_2-x_1)$

$2-(-1)=m(4-0)$

$2+1=m(4)$

$\frac{3}{4}=\frac{4m}{4}$

$\boxed{m=\frac{3}{4}}$

$y+2=-3(x-4)$

$y+2=-3x+12$

$y=-2$

$(-2)+2=-3x+12$

$0=-3x+12$

$-12 \quad -12$

$\frac{-12}{-3}=\frac{-3x}{-3}$

$\boxed{x=4}$

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

$y+1=3x-12$

$-1 \quad -1$

$y=3x-13$

$(0)=3x-13$

$+13 \quad +13$

$\frac{13}{3}=\frac{3x}{3}$

$\boxed{x=\frac{13}{3}}$

$y=3(0)-13$

$\boxed{y=-13}$

$(34, -52)$ and $(51, -65)$

$(y_2 - y_1) = m(x_2 - x_1)$

$-65 - (-52) = m(51 - 34)$

$-65 + 52 = m(17)$

$\frac{-13}{17} = \frac{17m}{17}$

$m = -\frac{13}{17}$

$b = y - mx$

$b = (-52) - \left(-\frac{13}{17}\right)(34)$

$b = -52 - (-26)$

$b = -52 + 26$

$\boxed{b = -26}$

$y = mx + b$

$y = -\frac{13}{17}x - 26$

$(48, -30)$ and $(61, -45)$

$(y_2 - y_1) = m(x_2 - x_1)$

$-45 - (-30) = m(61 - 48)$

$-45 + 30 = m(13)$

$\frac{-15}{13} = \frac{13m}{13}$

$m = -\frac{15}{13}$

$b = y - mx$

$b = (-30) - \left(-\frac{15}{13}\right)(48)$

$b = -30 + \frac{720}{13}$

$b = \frac{330}{13}$

$\boxed{x = 22}$

$y = -\frac{15}{13}x + \frac{330}{13}$

$(110, 186)$ and $(145, 207)$

$(y_2 - y_1) = m(x_2 - x_1)$

$207 - 186 = m(145 - 110)$

$\frac{21}{35} = \frac{35m}{35}$

$\frac{3}{5} = m$

$0.6 = m$

$280 + 9.5t = 13t$

$-9.5t \quad -9.5t$

$\frac{280}{3.5} = \frac{3.5t}{3.5}$

$80 = t$

$T \geq 80$

$(100, 8000)$ and $(300, 7000)$

$(y_2 - y_1) = m(x_2 - x_1)$

$7000 - 8000 = m(300 - 100)$

$\frac{-1000}{200} = \frac{m(200)}{200}$

$-5 = m$

$b = y - mx$

$b = 8000 - (-5)(100)$

$b = 8000 - (-500)$

$b = 8000 + 500$

$b = 8500$

$y = mx + b$

$y = -5x + 8500$

$(50) = -5x + 8500$

$-8500 \quad -8500$

$\frac{-8450}{-5} = \frac{-5x}{-5}$

$x = 1690$

$y = mx + b$ — slope

$y = 45x - 810$ — y-intercept

$y = 45(18) - 810$

$y = 810 - 810$

$y = 0$

$y = 45(18) - 810$ — slope, x-int

$y = -55x + b$

$y = -55(4) + b$

$350 = -220 + b$

$+220 \quad +220$

$570 = b$

$y = mx + b$

$42 = m(5) + b$

y x

$y = mx + b$

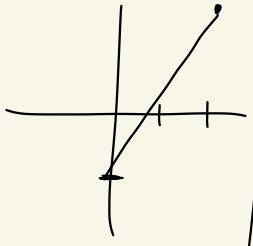
$85 = m(3) + 160$

$85 = -m(3) + 160$

$y = mx + b$

$y = -m(6) + 180$ — y-int

$0 = -m(6) + 180$ — x-int



$y = mx + b$

$1.25 = -m(3) + 2$

not x-int; y-int

$(-7,-8)$ and $(0,4)$

$(y_2 - y_1) = m(x_2 - x_1)$

$4 - (-8) = m(0 - (-7))$

$4 + 8 = m(0 + 7)$

$\frac{12}{7} = \frac{7m}{7}$

$\boxed{m = \frac{12}{7}}$

$(-72,25)$ and $(-54,13)$

$(y_2 - y_1) = m(x_2 - x_1)$

$13 - 25 = m(-54 - (-72))$

$-12 = m(-54 + 72)$

$\frac{-12}{18} = \frac{18m}{18}$

$-\frac{2}{3} = m$

$b = y - mx$

$b = 25 - \left(-\frac{2}{3}\right)(-72)$

$b = 25 - (48)$

$b = -23$

$3x + 3y = -x + 5y$

$+x \quad +x$

$4x + 3y = 5y$

$-3y \quad -3y$

$4x = 2y$

$(1,2)$ ✓ $(2,4)$ ✓

$4(1) = 2(2)$ $4(2) = 2(4)$

$4 = 4$ ✓ $8 = 8$

(20, 180) and (29, 144)

$(y_2 - y_1) = m(x_2 - x_1)$

$144 - 180 = m(29 - 20)$

$\frac{-36}{9} = \frac{9m}{9}$

$-4 = m$

$b = y - mx$

$b = 180 - (-4)(20)$

$b = 180 - (-80)$

$b = 180 + 80$

$b = 260$

$y = mx + b$

$y = -4x + 260$

$(0) = -4x + 260$

$-260 \quad -260$

$\frac{-260}{-4} = \frac{-4x}{-4}$

$\boxed{x = 65}$

$18\frac{km}{h}$ $10\frac{km}{h}$

0 12

$18x = 10x + 12$

$-10x \quad -10x$

$\frac{8x}{8} = \frac{12}{8}$

$x = \frac{3}{2}$ $x = 1.5$

(0,10) and (20,60)

$y = mx + b$

$28 = 8(3) + b$

slope; point that isn't x-int

$y = 2x + 5$

$x = 2$

$y = 2(2) + 5$

$y = 4 + 5$

$\boxed{y = 9}$

(8,36) and (11,12)

$(y_2 - y_1) = m(x_2 - x_1)$

$12 - 36 = m(11 - 8)$

$\frac{-24}{3} = \frac{m(3)}{3}$

$\boxed{-8 = m}$

$280 + 9.5x = 13x$

$-9.5x \quad -9.5x$

$\frac{280}{3.5} = \frac{3.5x}{3.5x}$

$80 = x$

$\frac{225\text{ km}}{60\text{ min}}$ $\frac{50\text{ km}}{60\text{ min}}$ $0.83(42) =$

$\frac{15}{4}$ km/min $\frac{5}{6}$ km/min

$\frac{15}{4}x = \frac{5}{6}x + 35$

$-\frac{5}{6}$ $-\frac{5}{6}$

$\frac{35}{12}x = \frac{35}{\frac{35}{12}}$ $x = \frac{35}{1} \cdot \frac{12}{35} = \frac{420}{35} = \boxed{12}$

$$\frac{18\,km}{h} \cdot \frac{1h}{60min} = \frac{18\,km}{60min} = \frac{3}{10}\,km/min$$

$$\frac{10\,km}{1h} \cdot \frac{1h}{60min} = \frac{10\,km}{60min} = \frac{1}{6}\,km/min$$

$$\frac{1}{6}(12) \cdot \frac{1}{6}x = \frac{3}{10}x$$

$$2 \cdot \frac{1}{6}x = \frac{3}{10}x$$

$$-\frac{1}{6}$$

$$2 = \frac{2}{15}x$$

$$\left(\frac{2}{15}\right)$$

$$\boxed{x = 15}$$

$1000 - 7x = 1255 - 10x$

$+10x \qquad +10x$

$1000 + 3x = 1255$

$-1000 \qquad -1000$

$\frac{3x}{3} = \frac{255}{3}$

$x = 85$

$1000 - 7x = 1255 - 10x$

$1000 - 7(85) = 1255 - 10(85)$

$1000 - 595 = 1255 - 850$

$405 = 405$

405 MB

$149 - 95h = 170 - 110h$

$+110h \qquad +110h$

$149 + 15h = 170$

$-149 \qquad -149$

$\frac{15h}{15} = \frac{21}{15}$

$\frac{21}{15} = \frac{7}{5}$

$t > \frac{7}{5}$

$540 + 90m = 960 + 60m$

$-60m \quad -60m$

$540 + 30m = 960$

$-540 \quad -540$

$\frac{30m}{30} = \frac{420}{30}$

$m = 14$

$15 - \frac{5}{6}(6) = 25 - 2\frac{1}{2}(6)$

$15 - 5 = 25 - 15$

$10 = 10$

10 cm

$\frac{5\text{ cm}}{6\text{ hr}} = \frac{5}{6}\text{ cm/hr}$

$15 - \frac{5}{6}x = 25 - 2\frac{1}{2}x$

$+\frac{5}{6}x \qquad +\frac{5}{6}x$

$15 = 25 - \frac{5}{3}x$

$-25 \quad -25$

$-10 = -\frac{5}{3}x$

$\left(-\frac{5}{3}\right) \quad -\frac{5}{3}$

$6 = x$

$$\frac{2\%}{3\text{ min}} = \frac{2}{3}\text{ pts/min}$$

$$13 + \frac{2}{3}x = 25 + \frac{1}{3}x$$

$$-\frac{1}{3}x \qquad -\frac{1}{3}x$$

$$13 + \frac{1}{3}x = 25$$

$$-13 \qquad -13$$

$$12 \div \frac{1}{3}$$

$$\frac{\frac{1}{3}x = 12}{\frac{1}{3} \quad \frac{1}{3}}$$

$$\frac{12}{1} \cdot \frac{3}{1} = \frac{36}{1} = 36$$

$$x = 36$$

$$\boxed{x \geq 36\text{ min}}$$

$2.5x = 2x + 15$

$-2x \quad -2x$

$0.5x = 15$

$\frac{0.5x}{0.5} = \frac{15}{0.5}$

$\boxed{x = 30}$

$2.5(30) = 2(30) + 15$

$75 = 60 + 15$

$75 = 75$