

Final - Fri 19 Dec

S-101

8-3

20. $(13, 10)$ & $(10, 13)$ $y = mx + b$

$$m = \frac{10 - 13}{13 - 10} = \frac{-3}{3} = -1$$

$$10 = -1(13) + b \quad y = -x + 23$$

$$b = +23$$

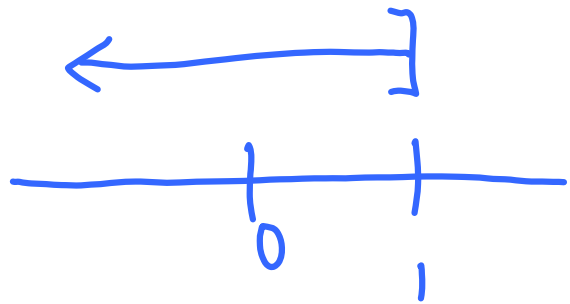
$$2. \quad 8x - 2 \leq 9x - 3x$$

$$8x - 2 \leq 6x$$

$$2x - 2 \leq 0$$

$$2x \leq 2$$

$$x \leq 1$$



24.

$$3x - y = 5$$

$$-x + y = -3$$

$$-2x = 2$$

$$x = -1$$

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

$$5 + y = -3$$

$$x = -1$$

$$y = -8$$

$$y = -8$$

15. $m = 2$, $(5, 5)$

$$y = mx + b$$

$$5 = 2(5) + b$$

$$5 = 10 + b$$

$$-5 = b$$

$$y = 2x - 5$$

23.

$$y = 2x + 7$$

$$y = 9x + 8$$

$$9x + 8 = 2x + 7$$

$$7x = -1$$

$$x = -\frac{1}{7}$$

$$y = 2\left(-\frac{1}{7}\right) + 7$$

$$y = -\frac{2}{7} + 7$$

$$y = 6\frac{5}{7}$$

Practice Final

69. 16 ft. one piece : x
other : $16 - x$

67. $6 - (2z - 3) = 1 - 3z$

$$6 - 2z + 3 = 1 - 3z$$

$$9 - 2z = 1 - 3z$$

$$9 + z = 1$$

$$z = -8$$

100. $p = n + m + k$

(n)

$$p - m - k = n$$

99.

$$w = x + xyz$$

(7)

$$w - x = xyz$$

$$\frac{w-x}{xy} = z$$

99. Two consecutive integers

x

x+1

x + (x+1)

2x+1

$$76. \quad \frac{1}{5}(\sqrt{x}-6) = -\frac{\sqrt{5}}{2} - \frac{7}{2}$$

$$x - \frac{6}{5} = -\frac{12}{2}$$

$$x - \frac{6}{5} = -\frac{6}{1}$$

$$x = -\frac{6 \cdot 5}{1 \cdot 5} + \frac{6}{5}$$

$$x = -\frac{30}{5} + \frac{6}{5}$$

$$x = -\frac{24}{5}$$

121. 430 seats \$12,243

adults: \$47 a

children: \$16 c

$$a + c = 430$$

$$47a + 16c = 12,243$$

$$c = 430 - a$$

$$47a + 16(430 - a) = 12,243$$

$$47a + 6880 - 16a = 12,243$$

$$31a + 6880 = 12,243$$

$$31a = 5363$$

$$a = 173$$

$$c = 257$$

123

$$n = 127$$

$$d = 635$$

$$d = 5n \quad 10d + 5n = 6985$$

$$10(5n) + 5n = 6985$$

$$50n + 5n = 6985$$

$$55n = 6985$$

$$n = 127$$

119.

	speed	time	dist
freight	50	$t+2$	d
passenger	90	t	d

$$d = 50(t+2)$$

$$d = 90t$$

$$90t = 50(t+2)$$

$$90t = 50t + 100$$

$$40t = 100$$

$$t = 2\frac{1}{2} \text{ hrs}$$

$$d = \left(\frac{90}{1}\right) \left(\frac{5}{2}\right)$$

$$d = 22\frac{1}{2} \text{ miles}$$

114.

	gal of sol	% acid	gal of acid
pure	x	100%	$(100\%)(x)$
60%	6	60%	$(60\%)6$
mix	$x+6$	70%	$(70\%)(x+6)$

$$(100\%)(x) + (60\%)(6) = (70\%)(x+6)$$

$$100x + 60(6) = 70(x+6)$$

$$100x + 360 = 70x + 420$$

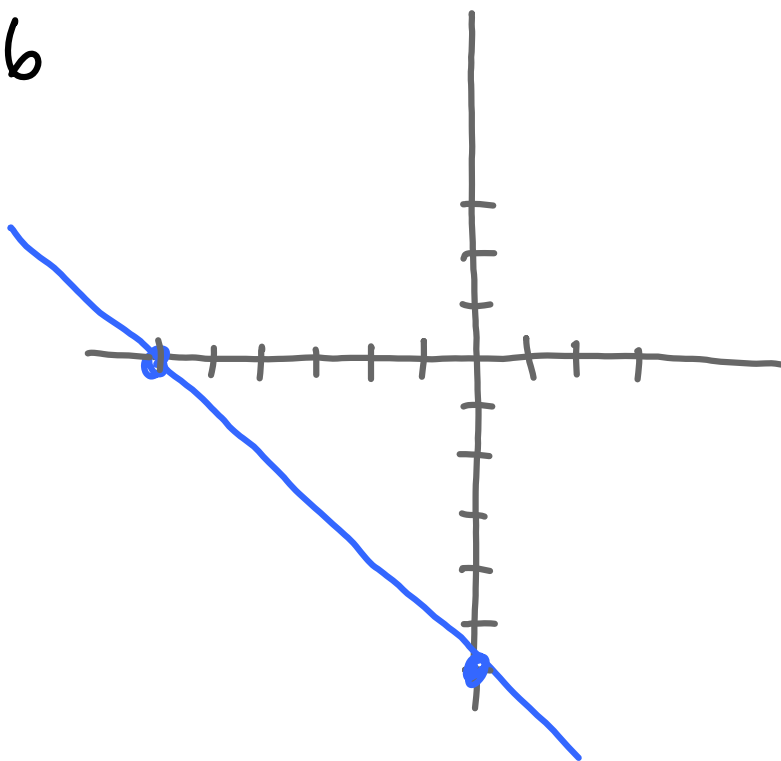
$$30x + 360 = 420$$

$$30x = 60$$

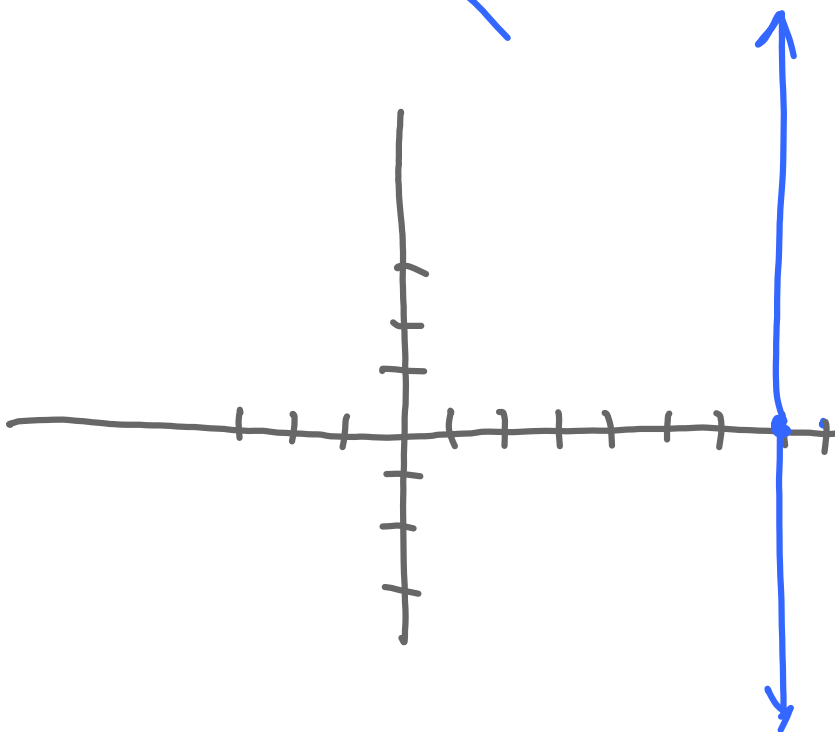
$$x = 2$$

128. $x + y = -6$

x	y
0	-6
-6	0



129. $x = 7$



132. $4x - 6y = -12$

x	y
-3	0
0	2

$$4x - 6(0) = -12$$

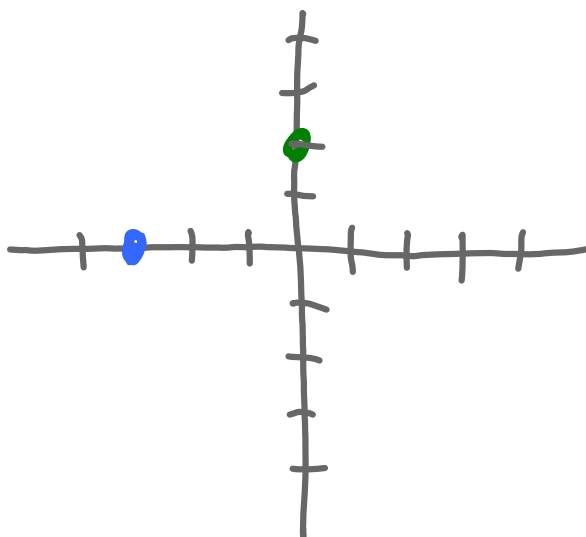
$$4x = -12$$

$$x = -3$$

$$4(0) - 6y = -12$$

$$-6y = -12$$

$$y = 2$$



133. $x = 4$ slope ?

undefined

no slope

83.
$$\frac{2}{3}x + \frac{6}{3} = -\frac{2}{3}$$

$$\frac{2}{3}x = -\frac{8}{3}$$

$$x = -\frac{8}{3} \cdot \frac{3}{2}$$

$$x = -4$$

$$\frac{3}{1} \left(\frac{2}{3}x + \frac{6}{3} \right) = \left(-\frac{2}{3} \right) \frac{3}{1}$$

$$2x + 6 = -2$$

$$2x = -8$$

$$x = -4$$

$$84. \frac{4}{1} \frac{3(x+3)}{4} = 4(2x-1)$$

$$3(x+3) = 8x-4$$

$$3x+9 = 8x-4$$

$$9 = 5x-4$$

$$13 = 5x$$

$$x = \frac{13}{5}$$

95. Three consecutive integers
sum 174
Who are they?

$$x = 57$$

$$x+1 = 58$$

$$x+2 = 59$$

$$(x) + (x+1) + (x+2) = 174$$

$$3x + 3 = 174$$

$$3x = 171$$

$$x = 57$$

98. $9x + y = 10$

(y)

$$y = -9x + 10$$