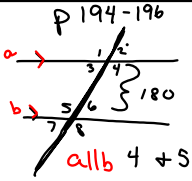
p 194-196



Vertical ∠s ALWAYS ≅

Corresponding, alt Int, alt Ext ≅ if Lines are ∥

a∥b 4 + 5 are ≅

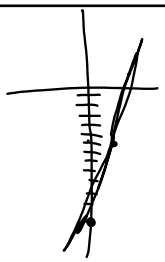
Jan 12-7:44 AM

$y = mx + b$

Slope - intercept

$y = 7x - 13$

$\frac{7}{1}$



Jan 12-7:51 AM

$ax + by = c$

$14x - 2y = 26$

$\frac{-a}{b}$ $\frac{-14}{-2} = 7$

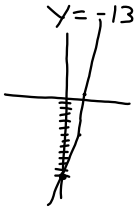
$m = 7$

$\frac{14x}{14} = \frac{26}{14}$

$x = \frac{13}{7} = 1\frac{6}{7}$

$-2y = 26$

$y = -13$



Jan 12-7:52 AM

8) $y = 7x - 13$

7) $14x - 2y = 26$

$-14x \quad -14x$

$\frac{-2y}{-2} = \frac{-14x}{-2} + \frac{26}{-2}$

$y = 7x - 13$

Jan 12-7:56 AM

$3x + 2y = 100000$

$m = \frac{-a}{b}$

$\frac{-3}{2}$

Jan 12-9:28 AM

$-6x - 7y = 200$

$m = \frac{-a}{b}$ $\frac{6}{-7}$

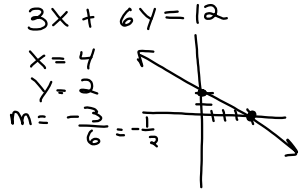
Jan 12-9:29 AM

$3x + 6y = 12$

$x = 4$

$y = 2$

$m = -\frac{3}{6} = -\frac{1}{2}$



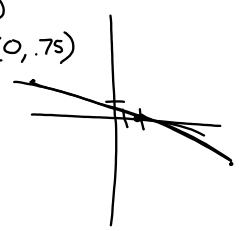
Jan 12-9:29 AM

$3x + 8y = 6$

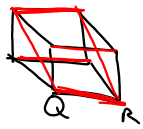
$x = 2 \quad (2,0)$

$y = \frac{6}{8} = \frac{3}{4} \quad (0, .75)$

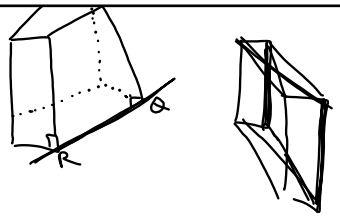
$m = -\frac{3}{8}$



Jan 12-9:31 AM

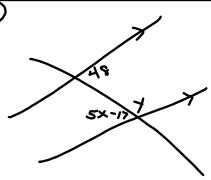


Jan 12-9:33 AM



Jan 12-7:58 AM

(17)



$y = 180 - 48$

$\boxed{y = 132}$

$48 = 5x - 17$

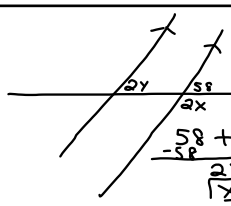
$+17 \quad +17$

$\frac{65}{5} = \frac{5x}{5}$

$\boxed{13 = x}$

Jan 12-8:05 AM

(18)



$2y = 58$ corresponding

$y = 29$

$-58 \quad -58$

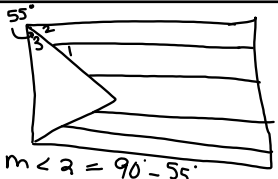
$2x + 58 = 180$ Linear pairs

$2x = 122$

$\boxed{x = 61}$

Jan 12-8:10 AM

19 55°



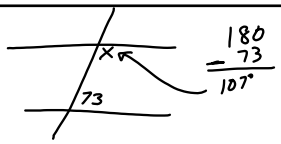
$m\angle 2 = 90 - 55$

$m\angle 2 = 35$

$m\angle 1 = 35$

Jan 12-8:08 AM

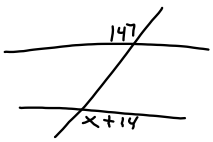
20



$180 - 73 = 107$

Jan 12-8:12 AM

21



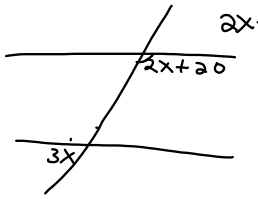
$147 = x + 14$

$-14 \quad -14$

$133 = x$

Jan 12-8:13 AM

22



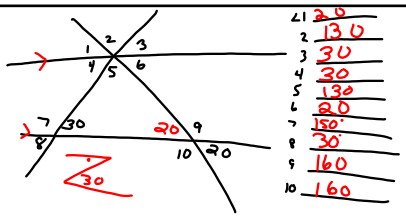
$2x + 20 + 3x = 180$

$5x + 20 = 180$

$5x = 160$

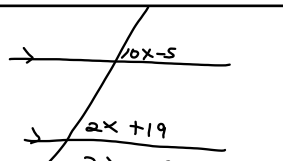
$x = 32$

Jan 12-8:14 AM



1 20
2 130
3 30
4 30
5 130
6 20
7 150
8 30
9 160
10 160

Jan 12-8:16 AM



$10x - 5$

$2x + 19$

$2x + 19 = 10x - 5$

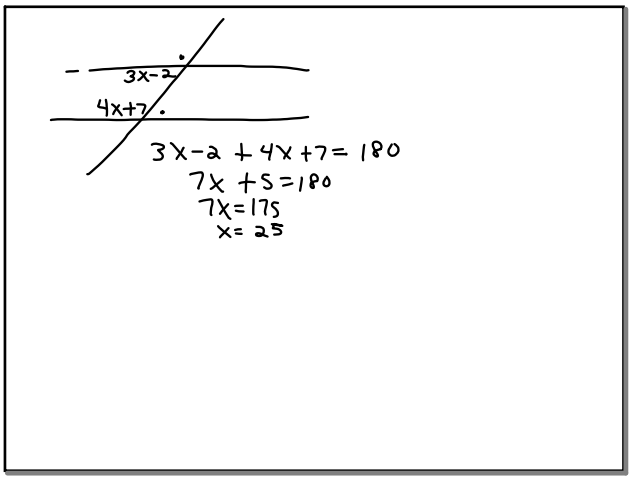
$24 = 8x$

$3 = x$

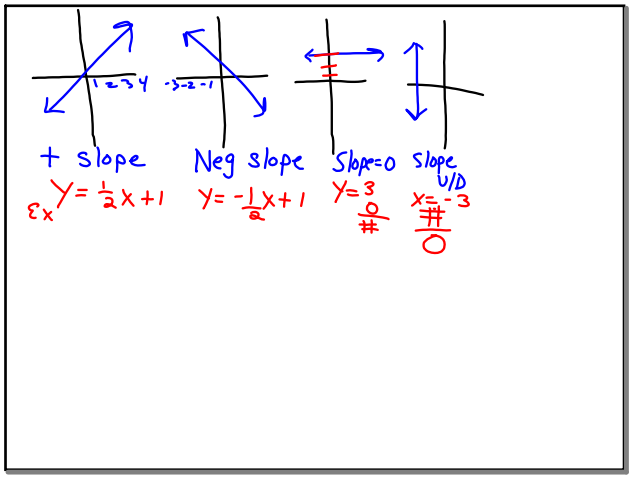
$x = 3$

prop. of Symmetry

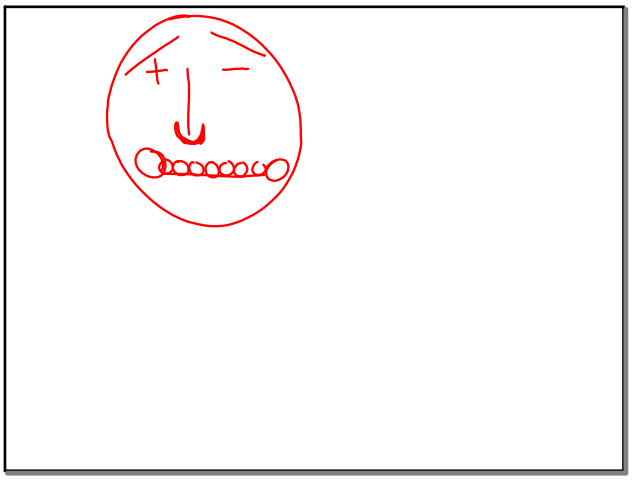
Jan 12-8:24 AM



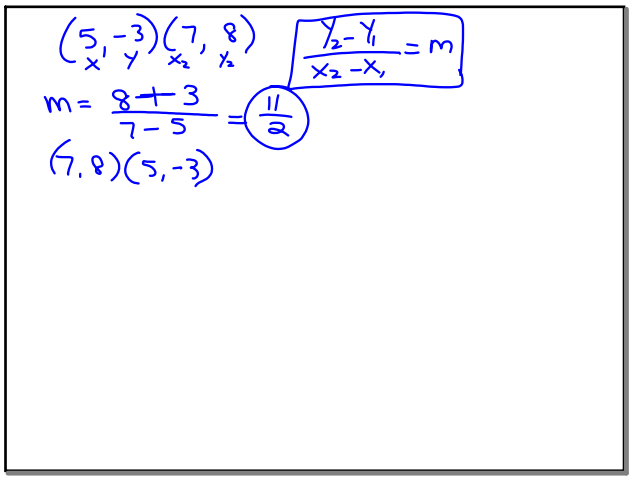
Jan 12-8:27 AM



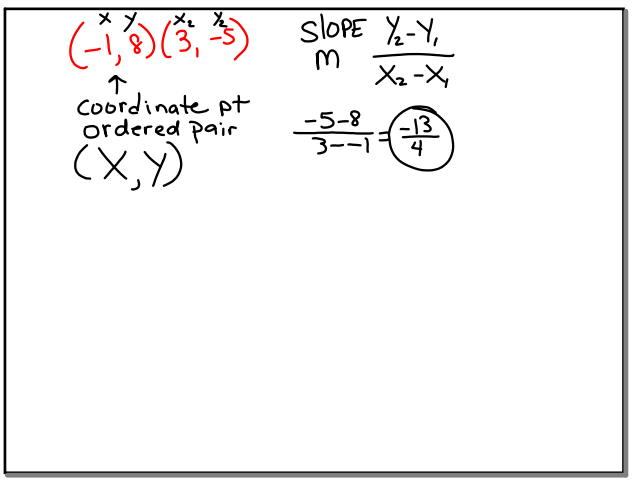
Jan 12-8:29 AM



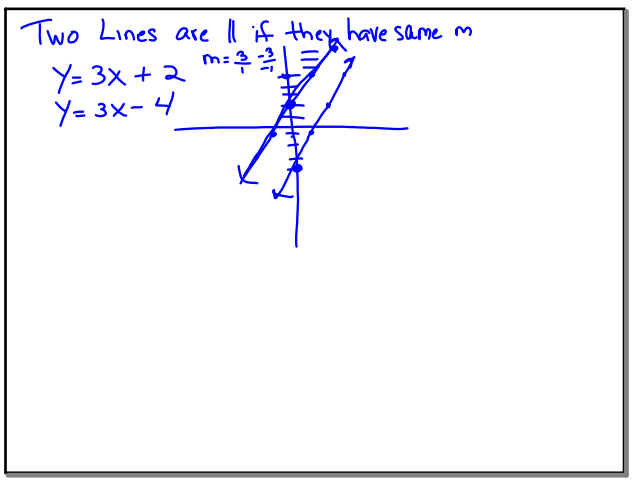
Jan 12-9:45 AM



Jan 12-8:31 AM



Jan 12-9:47 AM



Jan 12-8:35 AM

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

$m = 5$ $\perp = -\frac{1}{5}$

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

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

$m = -\frac{1}{15}$ $\perp m = 15$

$m = \frac{6}{7}$ $\perp m -\frac{7}{6}$

Jan 12-8:39 AM

p 167 #13

$(1,0)(7,4) \rightarrow \frac{4-0}{7-1} = \frac{4}{6} = \frac{2}{3}$

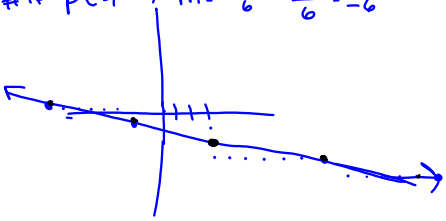
$(7,0)(3,6) \rightarrow \frac{6-0}{3-7} = \frac{6}{-4} = -\frac{3}{2}$

Neg Reciprical Slopes

These Lines are $\perp$

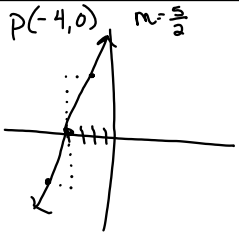
Jan 12-8:41 AM

#16 $P(3,-2)$ $m = -\frac{1}{6}$ $\frac{-1}{6} = \frac{1}{-6}$



Jan 12-8:43 AM

17) $P(-4,0)$ $m = \frac{3}{2}$



Jan 12-9:54 AM

p 167 19-21

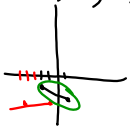
The Larger the Slope,
The steeper the Line

Jan 12-9:56 AM

#20 $(-2,-1)(1,-2)$ $\frac{-2+1}{1+2} = \frac{-1}{3}$ Steeper

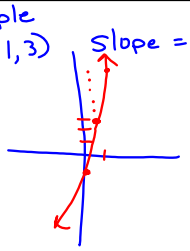
$(-5,-3)(-1,-4)$ $\frac{-4+3}{-1+5} = \frac{-1}{4}$

Which is Steeper



Jan 12-9:57 AM

Example
$P(1,3)$ Slope $= 5$



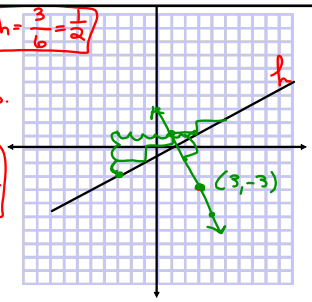
Jan 12-8:46 AM

p168 #23

Line $h = \frac{3}{6} = \frac{1}{2}$

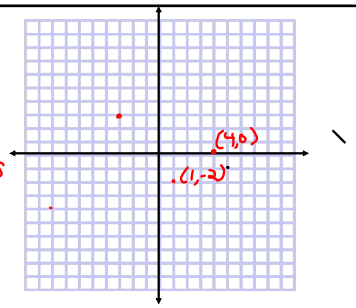
$\perp$ Lines have Neg Recip. Slope

Line n $\perp$ $m = \frac{-2}{1}$



Jan 12-8:49 AM

26)
No these 3 points have Different Slopes



Jan 12-8:56 AM

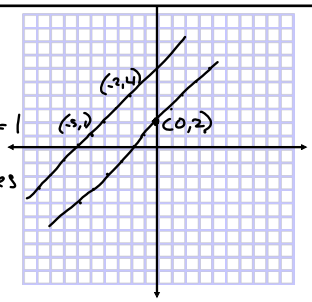
27

pt $(0,2)$

$(-2,4)(-5,1)$

$m = \frac{1-4}{-5+2} = \frac{-3}{-3} = 1$

$P(0,2)$ $m = 1$ So Lines are $\parallel$



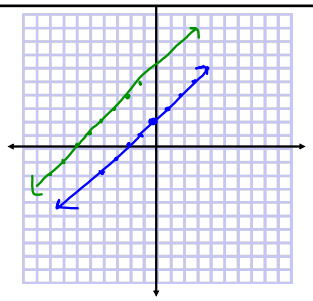
Jan 12-8:58 AM

27) point $(0,2)$

$\parallel$ TO $(-2,4)(-5,1)$

$m = \frac{1-4}{-5+2} = \frac{-3}{-3}$

$m = 1$



Jan 12-10:03 AM

$m = -5$ $b = 7$

$y = -5x + 7$

Jan 12-10:06 AM

$P(3,7)$ $m=2$

$y-y_1=m(x-x_1)$

$y-7=2(x-3)$

$y-7=2x-6$

$y=2x+1$

$y=mx+b$

$7=2(3)+b$

$7=6+b$

$-6\ \ -6$

$1=b$

$y=2x+1$

Jan 12-10:08 AM

$P(2,-3)$ $m=4$

$y-y_1=m(x-x_1)$

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

$y+3=4x-8$

$y=4x-11$

$y=mx+b$

$-3=4(2)+b$

$-3=8+b$

$-8\ \ -8$

$-11=b$

$y=4x-11$

Jan 12-10:10 AM

p176 #21

$P(-13,7)$ $m=0$

$y=7$

$P(-13,7)$ $m=$ u/d

$x=-13$

Jan 12-10:13 AM

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

Give an equation of a Line that goes through $(-2,1)$ and is $\parallel$ to $10x+4y=-8$

m of $10x+4y=-8$

$-\frac{a}{b}=-\frac{10}{4}=-\frac{5}{2}$

$(-2,1)$ $m=-\frac{5}{2}$

$y-1=-\frac{5}{2}(x+2)$

$y-1=-\frac{5}{2}x-5$

$y=-\frac{5}{2}x-4$

Jan 12-10:14 AM

20 $(0,-1)$ $y=-2x+3$

$m=-2$

$y+1=-2(x-0)$

$y+1=-2x$

$y=-2x-1$

Jan 12-10:18 AM

33) $P(2,3)$ $\perp$ Lines

$\frac{-2}{1}$ $\frac{1}{2}$

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

$m=-2$

$\perp m=\frac{1}{2}$

$y-3=\frac{1}{2}(x-2)$

$y-3=\frac{1}{2}x-1$

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

Jan 12-10:19 AM