Name: Key

4.4, 4.7, 5.3-5.5 Review

4.4 [|| & ⊥ Lines]

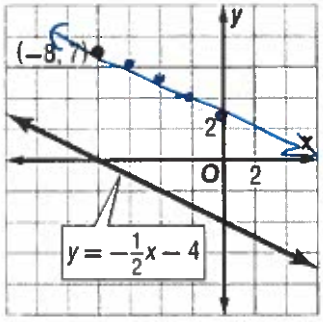
1) What do we focus on to assess if two lines are parallel?

slope; it's the same

2) What do we focus on to assess if two lines are perpendicular?

slope; opposite reciprocal

3) Write an equation in slope-intercept form for the line that passes through the given point and is parallel to the graph of the equation.



$y - 7 = -\frac{1}{2}(x + 8)$

$y - 7 = -\frac{1}{2}x - 4$

$+7 \quad +7$

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

4) Write an equation in slope-intercept form for the line that passes through the given point and is perpendicular to the graph of each equation.

(6, –2), $y = -3x - 6$

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

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

$-2 \quad -2$

$y = \frac{1}{3}x - 4$

4.7 [$f^{-1}(x)$ functions]

5) How do you find the inverse of a function?

Exchange the x + y

6) Write the inverse of the equation in $f^{-1}(x)$ notation:

$4x + 6y = 24$

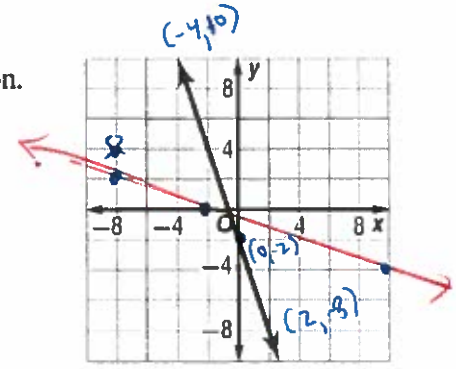
$4y + 6x = 24$

$-6x \quad -6x$

$\frac{4y}{4} = \frac{-6x + 24}{4}$

$f^{-1}(x) = -\frac{3}{2}x + 6$

7) Graph the inverse of the function.



Symmetrical over $y = x$

5.3 [multi-step inequalities]

8) When do you change the inequality when solving equations?

When mult/divide by a neg

9) Solve and graph inequality. Give a possible solution.

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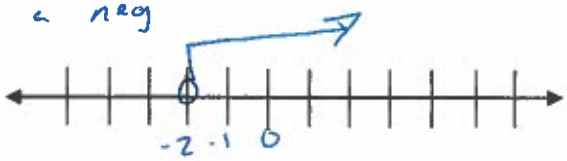


$-6(w+1) < 2(w+5)$

$-6w - 6 < 2w + 10$

$+6 \quad +6$

$-6w < 2w + 16$

$-2w \quad -2w$

$-8w < 16$

$\frac{-8w}{-8} < \frac{16}{-8}$

$w > -2$

5.4 [compound inequalities]

10) Compare and contrast "and" and "or" inequalities

<, ≤ are "ands"; the graph connects >, ≥ are "ors", the graph goes opposite ways

For 11 & 12, solve each compound inequality. Then graph the solution set.

11) $\frac{1}{2}n \leq -2$ or $2n - 2 > 6 + n$

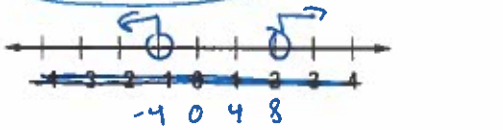
(1) (2)

$+2 \quad +2$

$n \leq -4$ or $2n > 8 + n$

$-n \quad -n$

$n \leq -4$ OR $n > 8$



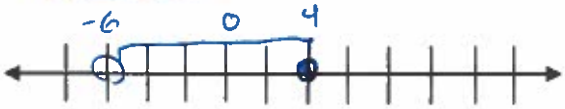
12) $4 > -x - 2 \geq 2$

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

$6 > -x \geq 4$

$\div -1 \quad \div -1 \quad \div -1$

$-6 < x \leq 4$



5.5 [Inequalities involving absolute value]

13) What makes an absolute inequality an "and?" What makes it an "or?"

<, ≤ >, ≥

For 14 & 15, solve each inequality. Then graph the solution set.

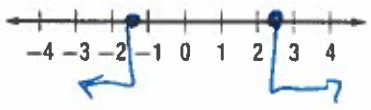
14) $|2d - 1| - 2 \geq 2$ (OR)

$+2 \quad +2$

$|2d - 1| \geq 4$

$2d - 1 \geq 4$ OR $2d - 1 \leq -4$

$d \geq \frac{5}{2}$ OR $d \leq \frac{-3}{2}$



15) $|x - 4| < 4$ (AND)

$-4 < x - 4 < 4$

$0 < x < 8$