Piecewise Functions

$$f(x) = \begin{cases} 2x^2 - 3 & x < -2 \\ 9x + 1 & -2 \le x \le 4 \\ -5 & x > 4 \end{cases} \leftarrow$$

$f(3) = 4(3) + 1$
$= 13$

$f(-5) = 2(-5)^2 - 3$
$= 2 \cdot 25 - 3$
$= 50 - 3$
$= 47$

$f(176) = -5$

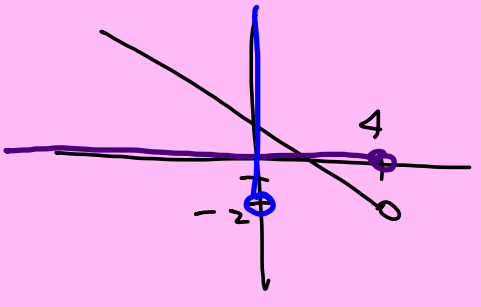
Function?

$\{(2,3)\ (-4,7)\ (5,-6)\ (2,-8)\}$

Domain/Range

Domain L to R
$x < 4$

Range $y > -2$



3) Slope $y = \frac{4}{7}x + 8$ $m = \frac{4}{7}$

$2x - 6y = 9$ $m = -\frac{A}{B} = \frac{-2}{-6} = \frac{1}{3}$

$x = 5$ undef. slope

$(7,-4)$ & $(8,3)$ $m = \frac{3 - -4}{8 - 7} = \frac{7}{1} = 7$

4) Find slopes parallel = same slope
perp = opp. reciprocal

5) Find x- & y-int

$2x - 4y = 8$

4	0 ← x-int (4,0)
0	-2 ← y-int (0,-2)

7-9) Write eq. of lines

Slope-int: $y = mx + b$

point-slope: $y - y_1 = m(x - x_1)$