

PARALLEL

PERPENDICULAR

~~PARALLEL~~ PARALLEL LINES HAVE SAME SLOPE

PERPENDICULAR LINES HAVE SLOPES THAT ARE NEGATIVE RECIPROALS



①  $m=7$

PARALLEL

⑦

PERPENDICULAR

7  
START WITH GIVEN SLOPE

$\frac{7}{1}$   
WRITE IN FRACTION FORM

$\frac{1}{7}$   
FLIP IT

$-\frac{1}{7}$   
CHANGE ITS SIGN

①  $-\frac{1}{7}$

②  $m=-\frac{2}{3}$

PARALLEL

②  $-\frac{2}{3}$

PERP.

$-\frac{2}{3} \rightarrow -\frac{2}{3} \rightarrow \frac{3}{-2} \rightarrow \frac{3}{2}$

③  $\frac{3}{2}$

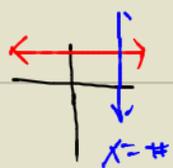
③  $m=0$

PARALLEL

③ 0

PERP.

UNDEFINED



$\frac{0}{1} \rightarrow \frac{1}{0} \rightarrow -\frac{1}{0}$

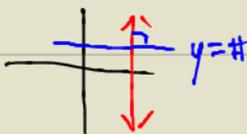
④  $m=UNDEFINED$

PARALLEL

UNDEFINED

PERP.

④  $m=0$



⑤  $L_1: y=7x-2$   
SLOPE=7

$L_2: y=-7x+5$   
SLOPE=-7

⑦  $7 \rightarrow \frac{7}{1} \rightarrow \frac{1}{7} \rightarrow -\frac{1}{7}$

NEITHER

⑥  $L_1: y=0.2x-5$   
 $0.2 = \frac{2}{10} = \frac{1}{5}$

$L_2: y=\frac{1}{5}x-2$   
 $\frac{1}{5}$

PARALLEL

⑦  $L_1: 3x-2y-2=0$   
 $3x-2=2y$   
 $\frac{3}{2}x - \frac{2}{2} = \frac{2}{2}y$   
 $\frac{3}{2}x - 1 = y$   
 $m=\frac{3}{2}$

$L_2: 2x+3y-15=0$   
 $3y = -2x+15$   
 $\frac{3}{3}y = -\frac{2}{3}x + \frac{15}{3}$   
 $y = -\frac{2}{3}x + 5$   
 $m = -\frac{2}{3}$

$\frac{3}{2} \rightarrow \frac{3}{2} \rightarrow \frac{2}{3} \rightarrow -\frac{2}{3}$

PERP.