Equations of straight lines

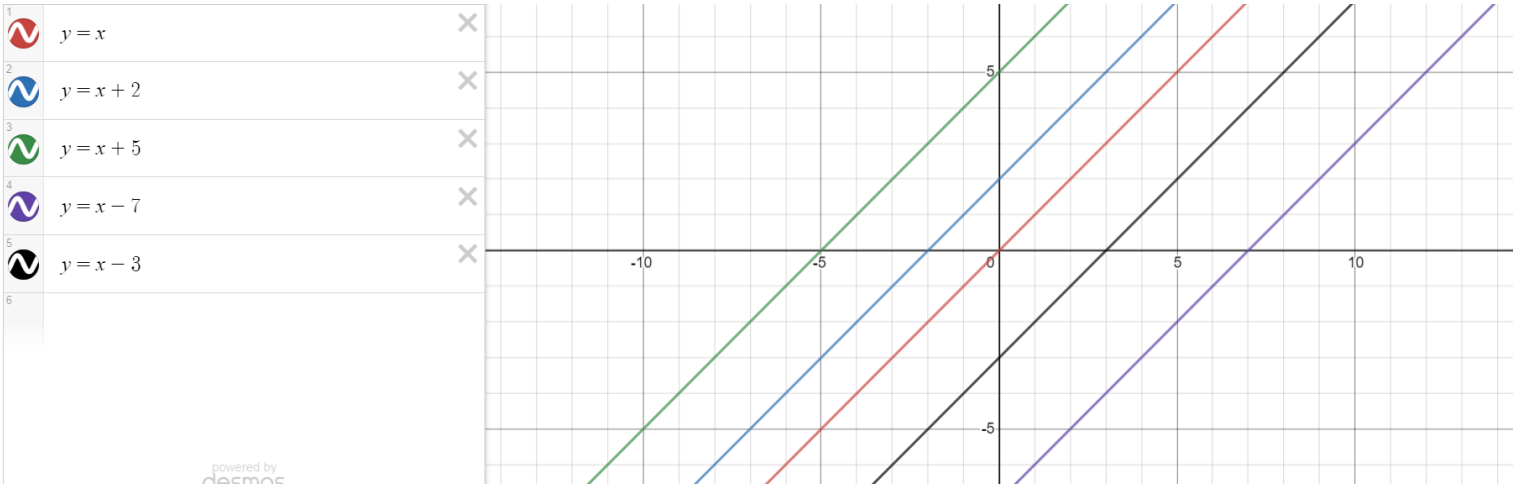
Equations of straight lines

$y = mx + c$

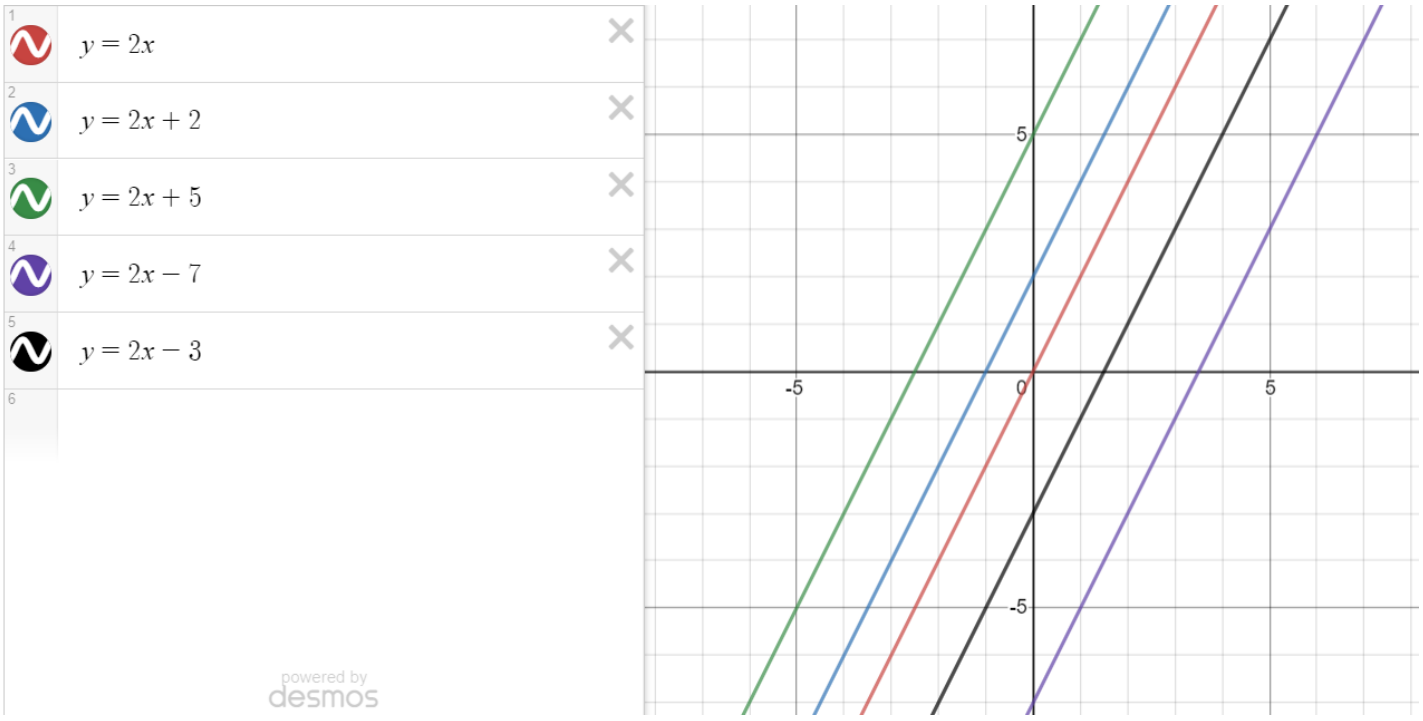
$m = gradient = \frac{\Delta y}{\Delta x}$

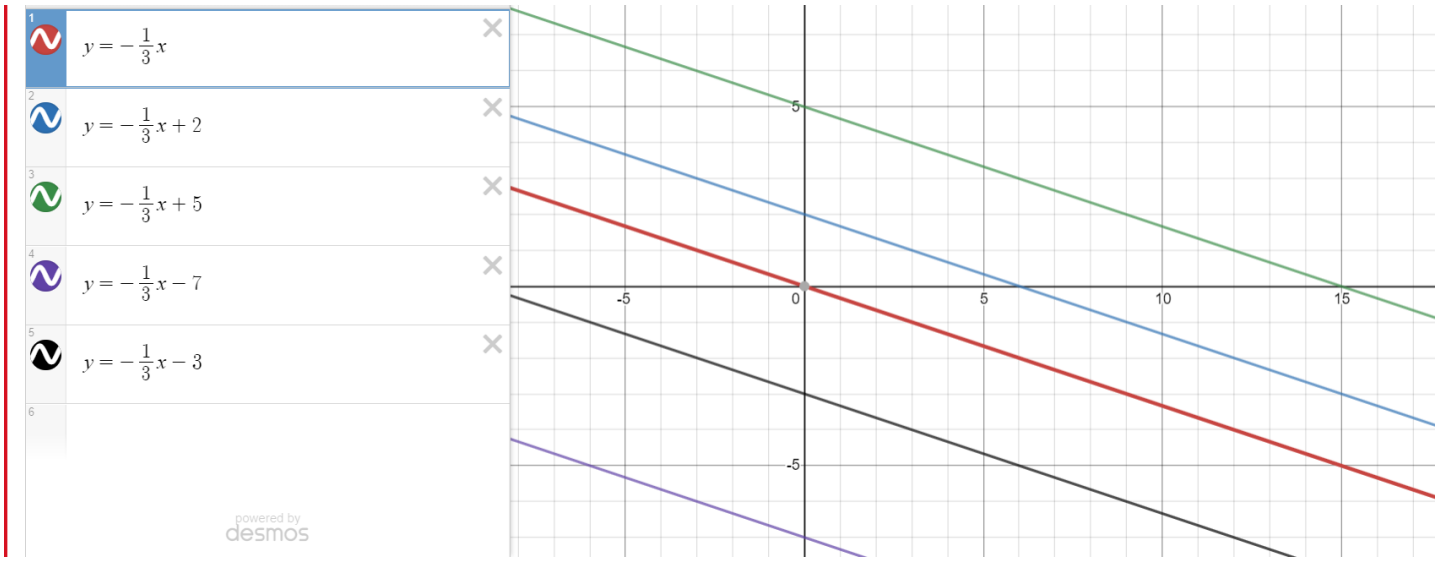
$y\ intercept = c$

the family of lines below are parallel since they have the same gradient (m=1), however, different values for the y intercept (c)

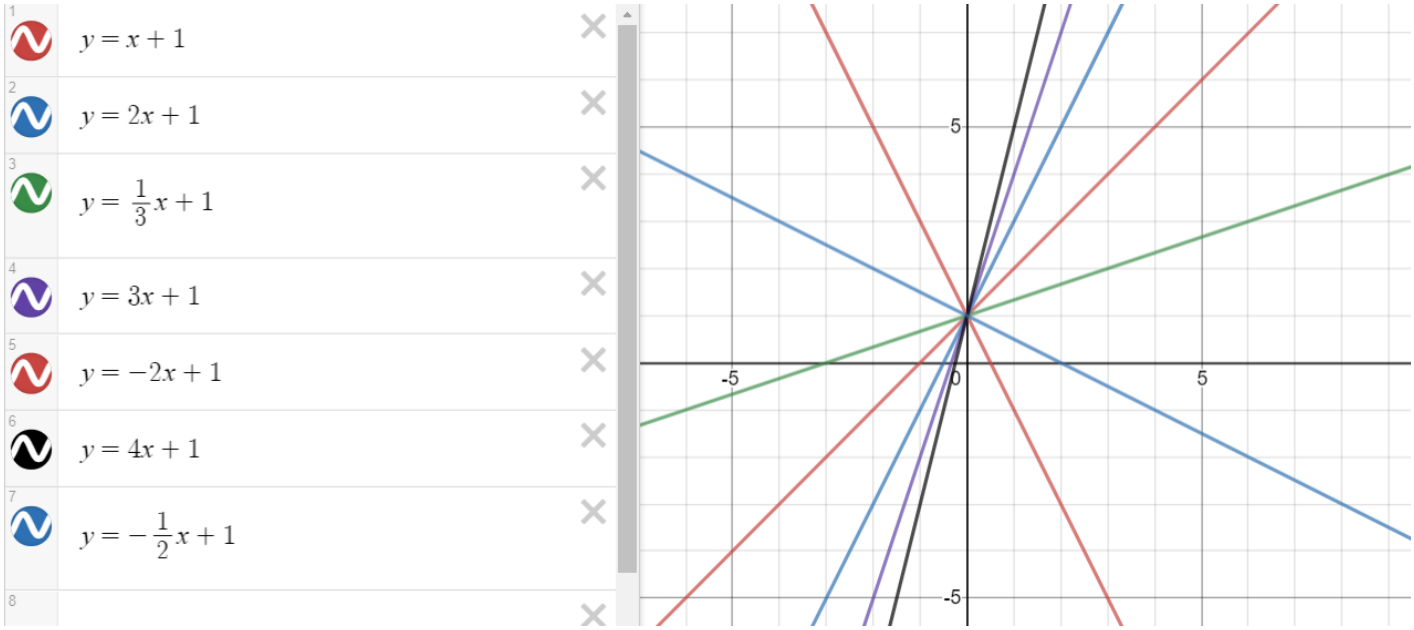


the family of lines below are parallel since they have the same gradient (m=2), however, different values for the y intercept (c)



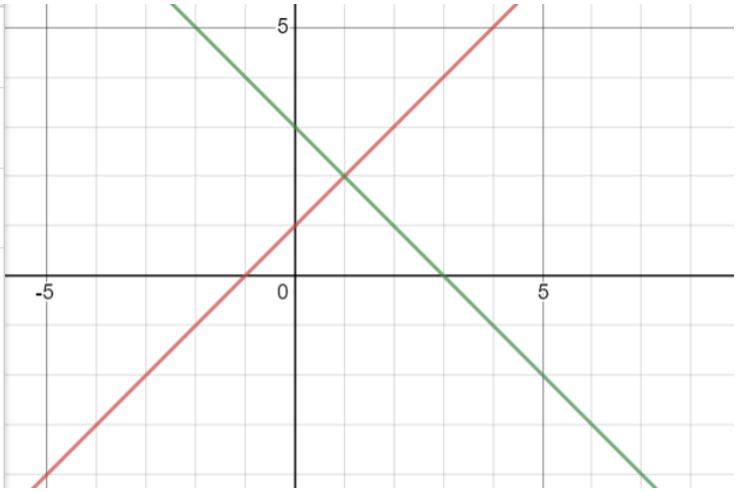


The family of lines below have the same y intercept (c=1), however, different values for the gradient (m)

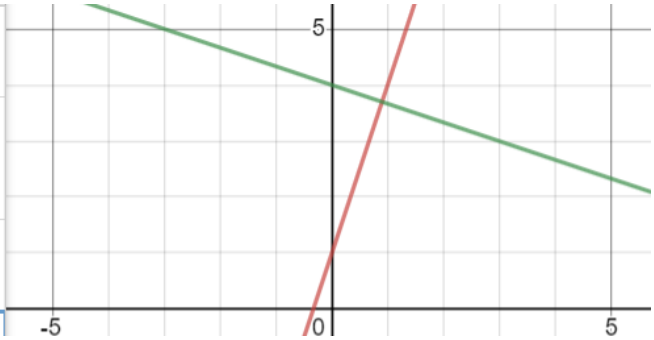


Perpendicular Lines

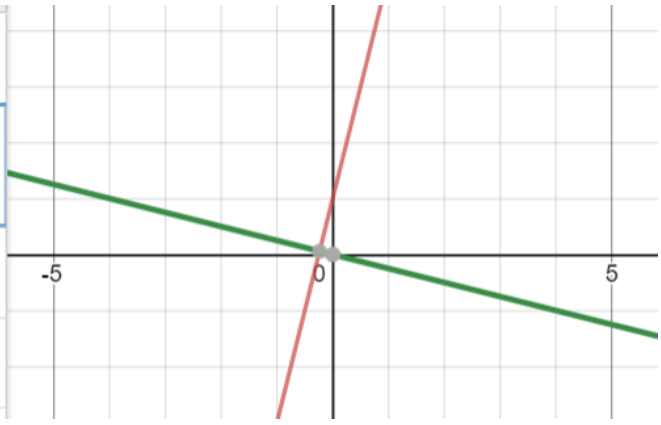
1. $y = x + 1$
2. $y = -x + 3$



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

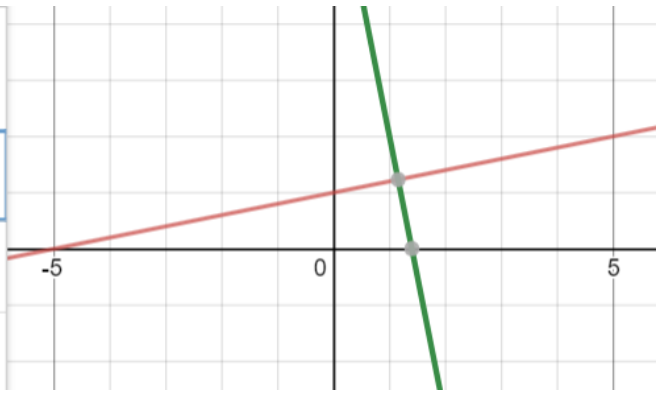


1. $y = 4x + 1$
2. $y = -\frac{1}{4}x$



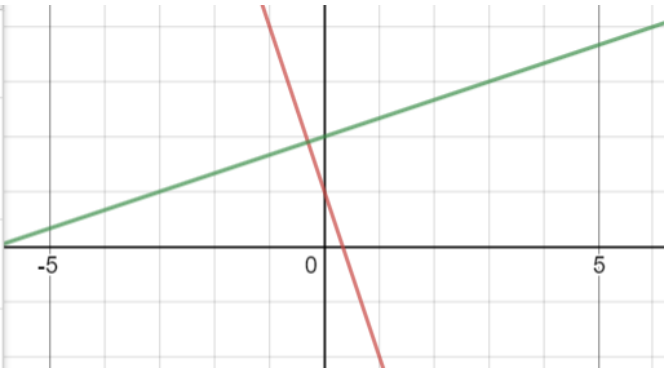
1 $y = \frac{1}{5}x + 1$

2 $y = -5x + 7$



1 $y = -3x + 1$

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

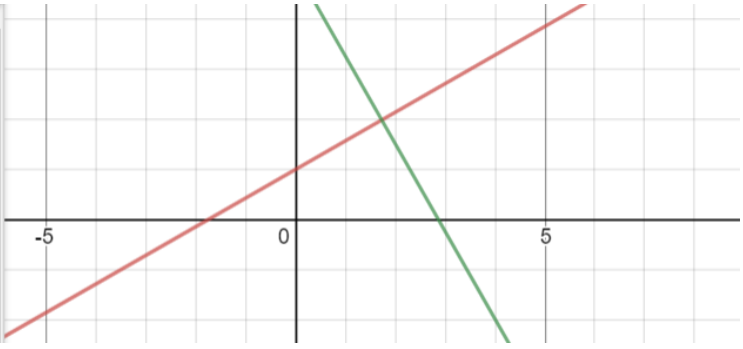


1 $y = -\frac{2}{5}x + 1$

2 $y = \frac{5}{2}x + 9$

1 $y = \frac{4}{7}x + 1$

2 $y = -\frac{7}{4}x + 5$



two lines L_1 *and* L_2 *with gradients* m_1 *and* m_2 *are perpendicular if* ;

$m_1 \times m_2 = -1$