

1. Calculate:  $\frac{1\frac{1}{2} \times \frac{2}{7}}{\frac{3}{7} \cdot (\frac{1}{2} \cdot \frac{1}{5})} =$

$\frac{1}{2 + \frac{1}{3 + \frac{1}{4}}} =$

2. Solve the mathematical riddles in which identical digits are replaced with identical letters:

a).  $IF \times FI \times G = 2015$

b).  $ON \times OFF = 2015$

3. Solve the equations *in your notebook*:

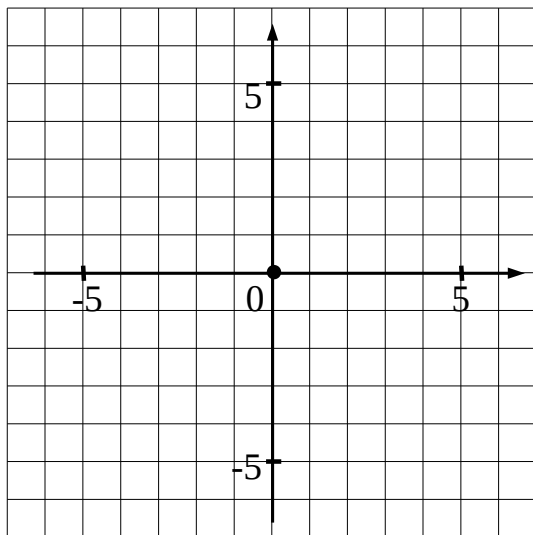
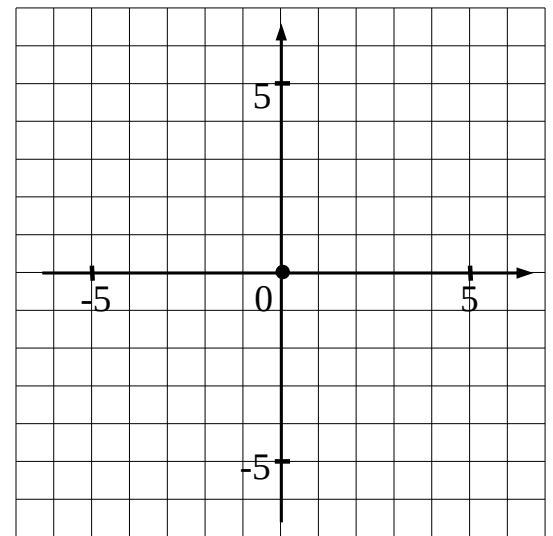
a).  $\frac{2x-5}{1-3x} = 3$

b).  $\frac{2}{2 + \frac{3}{x}} = \frac{2}{7}$

c).  $\frac{2015}{63 + \frac{5}{x}} = 31$

4. Fill in the table and plot the graph for  $y = |x|$  and  $y = |x + 1|$ .

x	-7	-5	-3	-1	0	1	3	5	7	9
y										



$y = |x|$

$y = |x + 1|$

x	-7	-5	-3	-1	0	1	3	5	7	9
y										

5. There are 3 points on a Cartesian plane:  $A(-1\frac{1}{2}, 1)$ ,  $B(\frac{1}{2}, 2)$ ,  $C(2\frac{1}{2}, 4)$ . Find the coordinates of the vectors ...

$\vec{a} = \overline{AB} = ( \quad , \quad )$

$\vec{b} = \overline{BC} = ( \quad , \quad )$

$\vec{c} = \overline{AC} = ( \quad , \quad )$

$\vec{a} + \vec{b} = ( \quad , \quad )$

$\vec{a} + 2\vec{c} = ( \quad , \quad )$

$\vec{c} - \vec{b} = ( \quad , \quad )$

6. Subtract 3D vectors  $\vec{a} = (3, -1, 4)$  and  $\vec{e} = (-1, 2, 1)$  :

$\vec{a} - \vec{e} = ( \quad , \quad , \quad )$