Name: _____ Period: _____ Date: _____

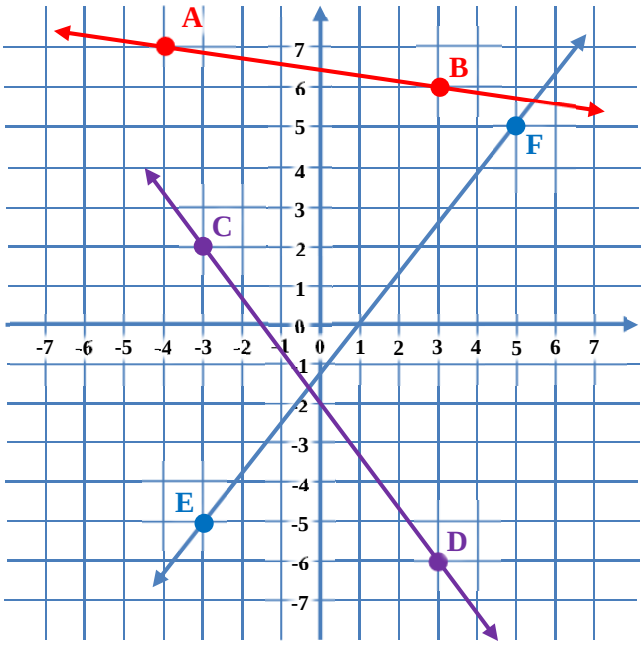
RATIOS AND PROPORTIONS Exit Quiz

Write the ratio expressing the slope of each line.

1. $m_{\overline{AB}}$

2. $m_{\overline{CD}}$

3. $m_{\overline{EF}}$



4. The ratio of the side lengths of an isosceles triangle is $\mathbf{5}:\mathbf{5}:\mathbf{7}$, and its perimeter is $\mathbf{102}\ \boldsymbol{m}$. What is the length of the base of the triangle?

5. The ratio of the angle measure in a parallelogram is $\mathbf{2}:\mathbf{3}:\mathbf{2}:\mathbf{3}$. What is the measure of each angle?

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Write the ratio expressing the slope of each line.

1. $m_{\overline{AB}} = \frac{y_B - y_A}{x_B - x_A} = \frac{6-7}{3-(-4)} = \frac{-1}{7}$

   $m_{\overline{AB}} = -\frac{1}{7}$

   $A(-4, 7)$ $B(3, 6)$

2. $m_{\overline{CD}} = \frac{y_D - y_C}{x_D - x_C} = \frac{-6-2}{3-(-3)} = \frac{-8}{3+3} = \frac{-8}{6}$

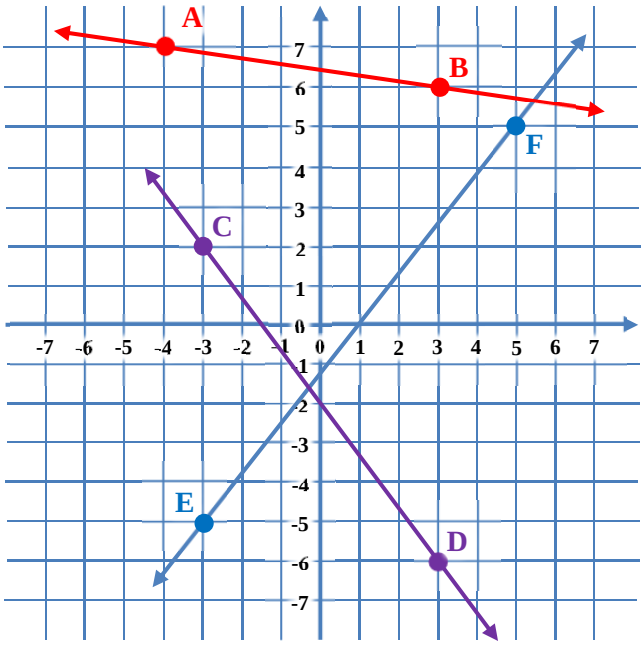
   $m_{\overline{CD}} = -\frac{4}{3}$

   $C(-3, 2)$ $D(3, -6)$

3. $m_{\overline{EF}} = \frac{y_F - y_E}{x_F - x_E} = \frac{5-(-5)}{5-(-3)} = \frac{5+5}{3+3} = \frac{10}{6}$

   $m_{\overline{EF}} = \frac{5}{3}$

   $E(-3, -5)$ $F(5, 5)$



4. The ratio of the side lengths of an isosceles triangle is $5:5:7$, and its perimeter is $102\ m$. What is the length of the **base** of the triangle?

   $P = 96\ m$

   $P = 5x + 5x + 7x = 17x$

   $102\ m = 17x$

   $\frac{102\ m}{17} = \frac{17x}{17}$

   $6\ m = x$

   $base = 7x = 7(6\ m) =$ $base = 42\ m$

5. The ratio of the angle measure in a parallelogram is $2:3:2:3$. What is the measure of each angle?

   $\Sigma\ interior\ \angle\ of\ quadrilateral = 360°$

   $\Sigma\ interior\ \angle\ of\ quadrilateral = 2x + 3x + 2x + 3x$

   $360° = 10x$

   $\frac{360°}{10} = \frac{10x}{10}$

   $36° = x$

   $2x = 2(36°) =$ $2x = 72°$ $3x = 3(36°) =$ $3x = 108°$

   $2:3:2:3 \rightarrow$ $72°:108°:72°:108°$