Write the ratio expressing the slope of each line.

1. \(m_{AB}\)

2. \(m_{CD}\)

3. \(m_{EF}\)

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?

5. The ratio of the angle measure in a parallelogram is 2:3:2:3. What is the measure of each angle?
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Write the ratio expressing the slope of each line.

1. \[ m_{AB} = \frac{y_B - y_A}{x_B - x_A} = \frac{6 - 7}{3 - (-4)} = -\frac{1}{7} \]
\[ m_{AB} = -\frac{1}{7} \]
\[ A(-4, 7) \quad B(3, 6) \]

2. \[ m_{CD} = \frac{y_D - y_C}{x_D - x_C} = \frac{-6 - 2}{3 - (-3)} = \frac{-8}{6} = -\frac{4}{3} \]
\[ m_{CD} = -\frac{4}{3} \]
\[ C(-3, 2) \quad D(3, -6) \]

3. \[ m_{EF} = \frac{y_F - y_E}{x_F - x_E} = \frac{5 - (-5)}{5 - (-3)} = \frac{10}{8} = \frac{5}{4} \]
\[ m_{EF} = \frac{5}{4} \]
\[ E(-3, -5) \quad F(5, 5) \]

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?

\[ P = 96 \text{ m} \]
\[ P = 5x + 5x + 7x = 17x \]
\[ 102 = 17x \]
\[ \frac{102}{17} = x \]
\[ 6 = x \]
\[ \text{base} = 7x = 7(6) = \text{base} = 42 \text{ m} \]

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

\[ \Sigma \text{interior } \angle \text{ of quadrilateral} = 360^\circ \]
\[ \Sigma \text{interior } \angle \text{ of quadrilateral} = 2x + 3x + 2x + 3x \]
\[ 360^\circ = 10x \]
\[ \frac{360^\circ}{10} = x \]
\[ 36^\circ = x \]
\[ 2x = 2(36^\circ) = 72^\circ \quad 3x = 3(36^\circ) = 108^\circ \]
\[ 2:3:2:3 \quad \rightarrow \quad 72^\circ:108^\circ:72^\circ:108^\circ \]