

Jadwin-Geometry-8th Period-Off Site Learning Packet Day 4

Ratios and Proportions day 1

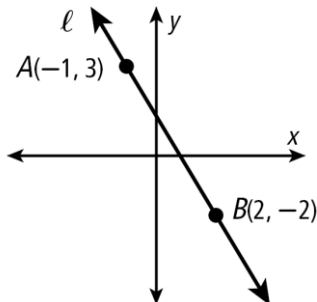
Ratio – compares two numbers by division can be written as a to b, or a : b, or $\frac{a}{b}$.

- Ex. 1 to 2; 1 : 2; and $\frac{1}{2}$ all represent the same thing. Slope is a ratio.

Example: Write a ratio expressing the slope of l .

$$\frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{-2 - 3}{2 - (-1)} = \frac{-5}{3}$$



Example: The ratio of the side lengths of a triangle is 4:7:5, and its perimeter is 96 cm. What is the length of the shortest side?

$$4x + 7x + 5x = 96$$

$$16x = 96$$

$$x = 6$$

$$4(6) = 24$$

Example: The ratio of the angle measures in a triangle is 1:6:13. What is the measure of each angle?

$$1x + 6x + 13x = 180$$

$$20x = 180$$

$$x = 9$$

$$1(9) = 9^\circ$$

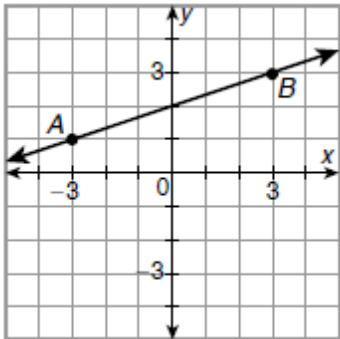
$$6(9) = 54^\circ$$

$$13(9) = 117^\circ$$

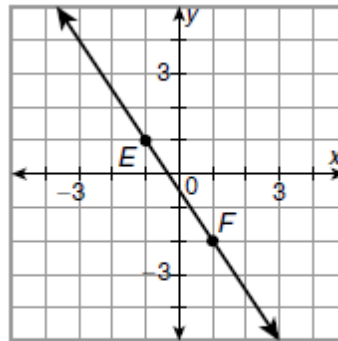
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Find the slope of the following lines.

1.



2.



3. The ratio of the side lengths of a triangle is 2:4:5, and the perimeter is 55 cm. What is the length of the shortest side?

4. The ratio of the angle measures of a triangle is 7:13:16. What is the measure of the largest angle?