Slope

Show You Know

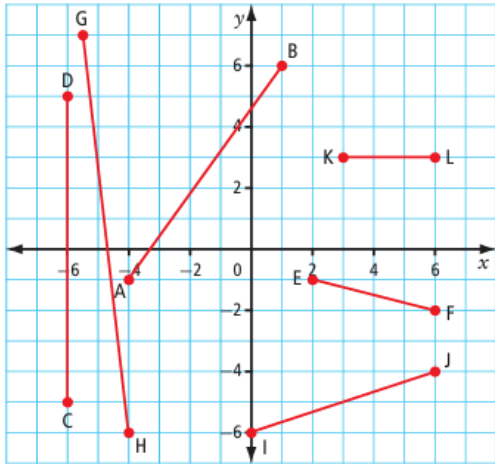
Ex. 1

Classify the slope of each line segment as positive, negative, or neither.

Ex. 2

Suppose that the roof truss in Example 2 has a height of 1 m and a span of 8 m. Determine the pitch and explain your answer.

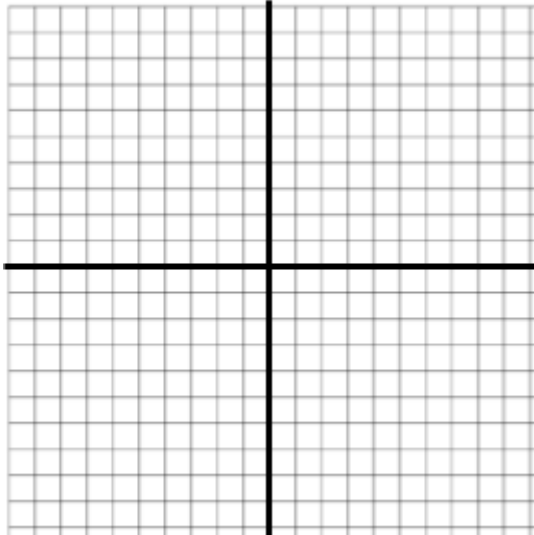**Ex. 3**

    a) Use a graph to determine the slope of the line segment with endpoints P(-5, 6) and Q(1, 10).

    b) Use the slope formula to determine the slope of the line segment with endpoints W(2, -2) and X(-5, 5).

Slope

Ex. 4

The point (-6, 1) is on a line that has a slope of $\frac{1}{3}$. List three other points on the line and graph the line.

Ex. 5

The graph shows the approximate times at the 1000-m mark and at the 1500-m mark for a rowing crew of the girls' junior open eight race at the Brentwood Regatta. Determine the average rate of change for this portion of the race.

Girls' Junior Open Eight Race

(297, 1500)

(205, 1000)

Distance (m)

Time (s)

Name: _____
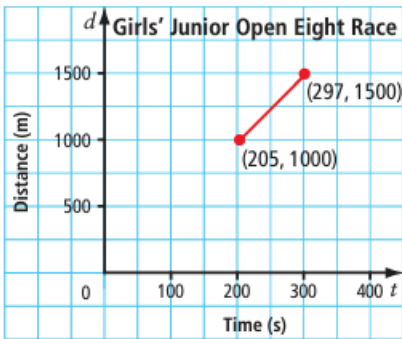
Slope

Practice

1. Place each line segment in the diagram in the appropriate column.

Positive Slope	Negative Slope	Zero Slope

2. Graph a line from each given point back to the origin. You can use the same coordinate grid. Label each line. Determine the slope of each line.

a. $(4, -2)$

b. $(7, 3)$

c. $(-3, 0)$

d. $(-2, -5)$

Name: _____

Slope

3. Building codes and safety concerns dictate slopes in structures. According to Canadian building codes, a wheelchair ramp cannot have a slope greater than $\frac{1}{12}$. When designing a mall, an architect has designed a central courtyard that is 84 cm higher than the corridor approaching it. How far away will a wheelchair ramp have to begin, in meters, if it is to have the steepest allowable slope?

4. In 1981, the population of Saskatoon, Saskatchewan, was 154 210. In 2006, its population had grown to 202 340. Determine the average annual rate of growth and, assuming this rate of growth will continue, project Saskatoon's population in 2021. Research the most recent population of Saskatoon that you can, and see if it matches your projection.