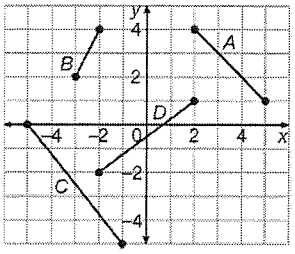
A&W Math 11 Name: _____ Block: _____

Chapter 6 Final Review (Slope and Rates)

1. What is the slope of line segment C?



   a. $\frac{-5}{4}$
   b. 2
   c. $\frac{5}{4}$
   d. -1

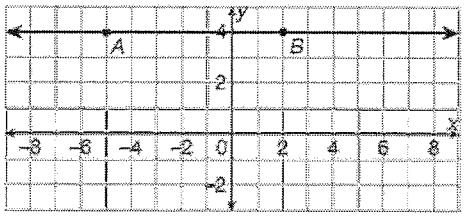
2. What would the grade be for a road that has a rise of 11 m and a run of 100 m?

   a. 15%
   b. 11%
   c. 7%
   d. 3%

3. Which slope or grade is the steepest?

   a. -0.25
   b. 0.04
   c. 36%
   d. 18%

4. What is the slope of the line?



   a. 0
   b. 2
   c. undefined
   d. 4

5. What is the slope of a line joining points (35, 27) and (35, 62)?

   a. 35
   b. undefined
   c. 7
   d. 0

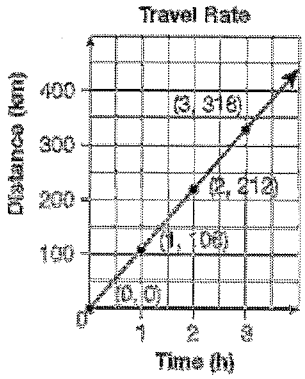
6. What is the slope of a line joining points (2, 17) and (9, 17)?

   a. 12
   b. undefined
   c. 7
   d. 0

7. Determine the angle of elevation if the slope is 0.3415.

   a. 20.640...°
   b. 18.855...°
   c. 24.957...°
   d. 16.201...°

8. Determine the rate of change:



   a. 111 km/h
   b. 106 km/h
   c. 102 km/h
   d. 97 km/h

9. Cameron is renting a car for a business trip. What is the rate of change?

Number of days	Rental Charge ($)
1	65
2	80
3	95

   a. $15/d
   b. $80/d
   c. $30/d
   d. $37/d

10. Jeff drives at an average rate of 105 km/h. How far would he drive in 3 h?

   a. 330 km
   b. 315 km
   c. 345 km
   d. 300 km

11. How many hours and minutes would it take to drive 252 km at 90 km/h?

a. 2 h 45 min
b. 2 h 42 min
c. 2 h 48 min
d. 2 h 39 min

12. Select the correct choice to complete the statement: 0.42 L/s = _____ mL/min.

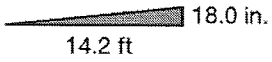
a. 24 900
b. 24 600
c. 25 200
d. 25 500

13. Select the correct choice to complete the statement if 1 gal = 3.785 L:
4 gal = _____ L

a. 14.82
b. 14.48
c. 15.14
d. 15.50

14. What is the slope of a line segment joining points (-12, 7) and (20, 37) in fraction form?

15. The code for wheelchair ramps states that they must not have a slope greater than $\frac{1}{12}$.
What is the slope of this ramp and does it fit the code? (Hint: Beware of units!)



16. Express 61 mi/gal in kilometres per litre if 1 mi = 1.61 km and 1 gal = 3.785 L.

17. Judy knows that the slope of a ski run is $\frac{5}{9}$. The coordinates of the top and bottom of the ski run on a cross-section plan are (7 m, 0 m) and (1325 m, y). What is the value of y?

Answers

1. A
2. B
3. C
4. A
5. B
6. D
7. B
8. B
9. A
10. B
11. C
12. C
13. C
14. 15/16
15. 0.106, no
16. 25.9 km/L
17. 732.2 m