QUIZ – Chapter 5 Part III & 6.1 – 6.3

1. Below is a table which represents the value of an antique dresser as a function of the number of years since purchase.

|  |  |
| --- | --- |
| Number of years since purchase *t* | Value V ($) |
| 0 | 350 |
| 1 | 400 |
| 2 | 450 |
| 5 | 600 |
| 10 | 850 |

a) Is the relation linear? Explain. [1]

b) Which variable will you put on the *x*-axis if you represent this function graphically?
 [1]

c) What is the rate of change? And what does it represent? [2]

1. Determine if the following relations are linear. You do not need to justify your answer.
 [2]
a) The volume of a sphere as a function of its radius: $V=\frac{4}{3}πr^{3}$.

b) $y=-3x+1.2$

c) The relation between the value of an investment as a function of the number of years, knowing that it increases by 8% each year.

d) The amount of fuel left as a function of the number of kilometres driven at a constant speed.

e) ) $y=2x^{2}-3$
2. Answer the following questions about the graph below:


a) What is the independent variable? [1]

b) Is this relation linear? Justify [1]

c) What is the rate of change? What does it represent? [2]

1. What is the slope and the y-intercept of the following lines: [3]
2. $y=\frac{2}{3}x-4$

slope: \_\_\_\_\_\_\_

y-intercept : \_\_\_\_\_\_\_
3. $y=x-2$

slope: \_\_\_\_\_\_\_

y-intercept : \_\_\_\_\_\_\_
4. Draw a line corresponding to each situation: [2]
a) positive slope b) undefined slope

 
c) negative slope d) slope 0

 
5. Fill the table with the words: parallel, perpendicular, neither. [3]

|  |  |  |  |
| --- | --- | --- | --- |
|  | $$y=\frac{1}{3}x-5$$ | $$y=3x-5$$ | $$y=-3x-5$$ |
| $$y=-\frac{1}{3}x+5$$ |  |  |  |
| $$y=\frac{1}{3}x+5$$ |  |  |  |
| $$y=3x+5$$ |  |  |  |

1. Determine the slope of a line that passes through the points A(205 ; -140) and B(-20 ; 10).
 [2]

1. Determine the slope of the segments AB and CD. [2]



1. Consider the points A, B, C et D on the figure below. Is ABCD a rectangle? Justify. [2]


2. Consider the equation $y=-2x+5$ [2]

 Find the *x* and *y*-intercepts and use them to graph it.

