

Alexander Galt Regional High School

Rates, Ratios, Percentages, Proportions

Student name: _____

Date: _____

Total : _____ out of 58

Rubric for Each Question

Type 1 Questions: Problem requires short work or a definition.

- 4 pts: Correct answer
- 0 pts: Answer is incorrect or left blank.

Type 2 Questions: Problem requires one or two steps to solve.

- 4 pts: Uses appropriate strategies to determine the information, determines all the required information, shows clear and organized work that justifies his/her results
- 3 pts: Uses appropriate strategies to determine the required information, determines most of the required information, shows clear and organized work that justifies his/her results
- 2 pts: Uses appropriate strategies to determine some of the required information, determines part of the required information, shows clear and organized work that justifies his/her results.
- 1 pt: Question has been attempted with minimum success or only the correct answer is given or the work does not support the correct final answer
- 0 pts: Answer is left blank.

Type 3 Questions: Problem requires multiple steps to solve and involves several major concepts

- 10 pts: Uses appropriate strategies to determine the information, determines all the required information, shows clear and organized work that justifies his/her results
- 8 pts: Most of the work is correct but the work is disorganized or some parts of the work is missing.
- 6 pts: A portion of the work is correct including formulas. There is missing work or the work is disorganized.
- 2 pt: Correct formulas are given but the solution shows very little understanding.
- 0 pts: Answer is left blank or solution makes no sense.

Content Assessment

C2	<p>PROPORTIONS</p> <ul style="list-style-type: none"> Calculates the percentage of a number Calculates the value corresponding to 100 per cent Recognizes ratios and rates Interprets ratios and rates Describes the effect of changing a term in a ratio or rate Compares ratios and rates qualitatively (equivalent rates and ratios, unit rate) Compares ratios and rates quantitatively (equivalent rates and ratios, unit rate) Translates a situation using a ratio or rate Recognizes a proportional situation using the context, a table of values or a graph Represents or interprets a proportional situation using a graph, a table of values or a proportion 	
C2	<p>GEOMETRY</p> <ul style="list-style-type: none"> Recognizes the geometric transformation(s) linking a figure and its image Recognizes congruent or similar figures Recognizes dilatation with a positive scale factor 	

1. There are three parts to this evaluation situation.

- Part A consists of six multiple choice questions.
- Part B consists of four short answer questions.
- Part C consists of two application situations.

2. Permitted materials

- Geometry set (ruler, compass, set square, protractor)
- Calculator
- Handwritten memory aid prepared by the student prior to the evaluation situation. The memory aid consists of one letter-sized sheet of paper ($8\frac{1}{2}$ " x 11"). Both sides of the sheet may be used. Any mechanical reproduction of this memory aid cannot be used.

Note: Consider any figure in the test is not drawn to scale unless specified otherwise in the question.

Part A Questions 1 to 6

At the end of the section, darken the letter that corresponds to your final answer. Show the work for the answer that you selected.

Each question is worth 4 marks.

1. What percent represents a ratio of 80.5 to 290 ?

A) 19.5% B) 28% C) $33\frac{1}{3}\%$ D) 35%

Work Area:

2. Karl bought red roses, yellow roses and white roses. The ratio of red to yellow was 2 to 7 and the ratio of yellow to white was 7.5 to 3 . She bought 10 red roses. How many white roses did she buy?

A) 10 B) 14 C) 20 D) 24

Work Area:

3. Christie invested \$ 1249.16 at a 5.85% interest rate for 39 years. How much interest did he earn? (1249.16)

A) \$270.50 bagels B) \$285.00 C) \$385.75 D) \$2850.00

Work Area:

4. Find the missing ratio in the following table:

Water	Jello
22.5	9
40	x
72.4	28.96

- A) $x = 12.5$ B) $x = 16$ C) $x = 18$ D) 20

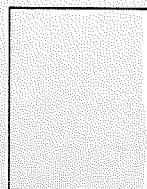
Work Area:

5. Lea took a loan from her bank for \$301.42. The bank is charging her an yearly interest rate of 4.23%. How much interest will she owe the bank at the end of the first year?

- A) \$12075.00 B) \$1207.50 C) \$120.75 D) \$12.75

Work Area:

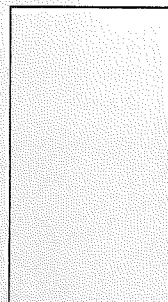
6. The drawing below shows a picture enlarged on a photocopier. Find the width, w , of the enlarged similar picture.



6.2 cm

2 cm

Original



130.2 cm

w

Enlargement

- A) 39 cm B) 39.5 cm C) 42 cm D) 42.5 cm

Work Area:

Final Answers. These are the answers that count. Circle the correct answer.

1. A) B) C) D) 2. A) B) C) D)

3. A) B) C) D) 4. A) B) C) D)

5. A) B) C) D) 6. A) B) C) D)

/ 24

Part B **Questions 7 to 12**

Show all work and formulas needed to solve the problem.

Each question is worth 4 marks.

/ 24

Q7) Which football team has the best record?

4	3	2	1	0
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Team	Number of Wins	Number of games
Vert et Or	19	27
Gators	22	29
Carabins	12	19
Rouge et Or	16	24

Q8) A recipe uses $4\frac{3}{4}$ cups of sugar to make 8 jars of strawberry jam. How much sugar is needed to make 10 jars?

4	3	2	1	0
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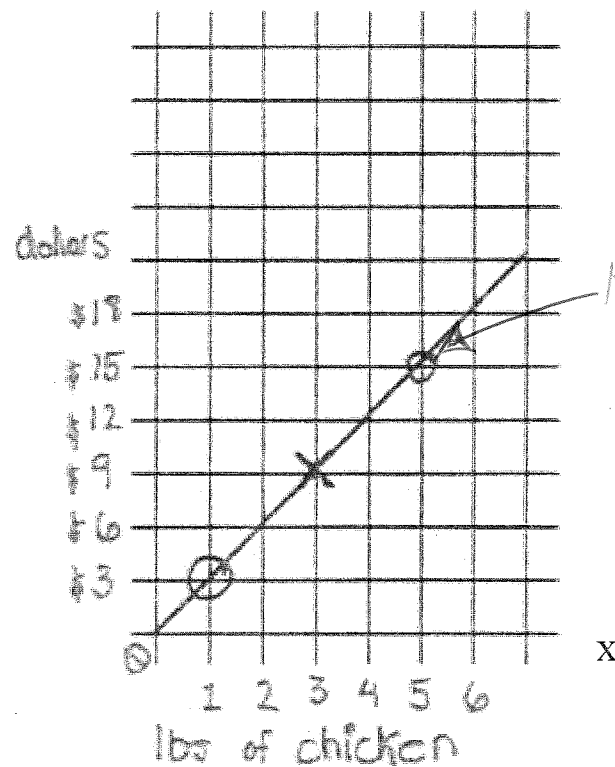
Q9) Using the unit rate (rate of change) in the following graph, what will be the price of _____ pounds of chicken?

≈ 32.25

4	3	2	1	
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y

Price (dollars) per pound (lbs) of chicken



Q10) The table shows some information about two classes of grade 8 students.

4	3	2	1	0
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	Saw the latest James Bond film on opening week	Did not see the latest James Bond film on the opening week
Girls	20	64
Boys	26	44

What would be the number of girls who saw the latest James Bond film if there are total of 600 students in the school?

Q11) A 8K television was regularly priced at \$ 6959.95. A store is offering 24% off the regular price this weekend. What is the sale price, not including taxes?

4	3	2	1	0
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Q12) Frozen lasagnas of the same company are available in two different sizes. The 245 g box is on special at \$3.84, while the 500 g box costs \$6.88. Calculate the unit price of each size and explain which box is the better buy per gram.

4	3	2	1	0
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Part C Question 10**/ 10**

Show all work and formulas needed to solve the problem.

The question is worth 10 marks.

Q13) Danielle started walking several weeks ago. She walks the same distance each day. She recorded the amount of kilometres in the below table.

10	8	6	2	0
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A) Complete the table and draw the graph showing the number of weeks.

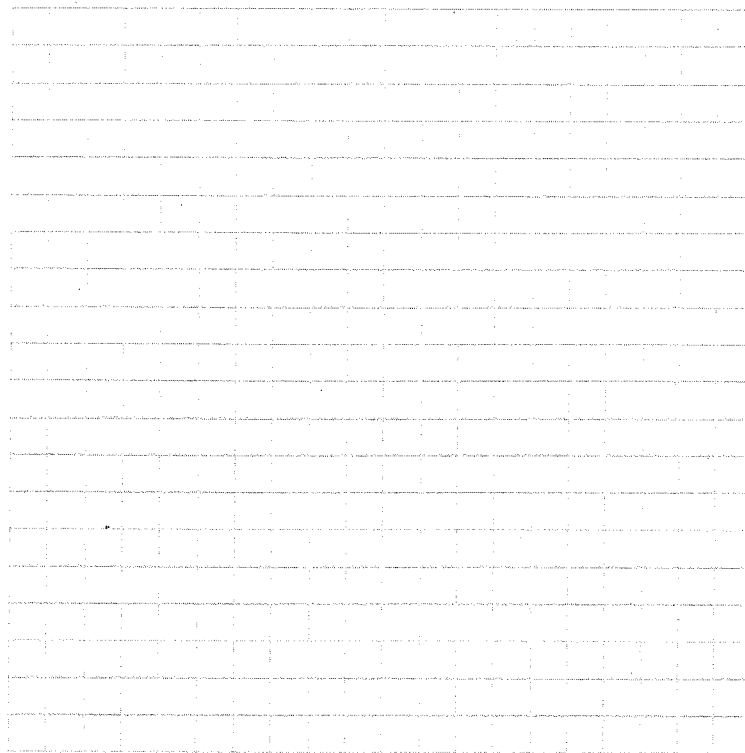
Table: Danielle's total kilometres and number of days

Hours	4	6	15	16	20	22
Miles	14.20			56.8		78.1

- b) Which is the independent variable? _____ (/1)
- c) Which is the dependent variable? _____ (/1)
- d) What is the unit rate (rate of change)? _____ (/1)

e) Draw the graph showing the distance walked and number of days (/ 3)

y



x