



GRADE 11 ESSENTIAL
MATHEMATICS (30S)

Midterm Practice Exam
Answer Key

GRADE 11 ESSENTIAL MATHEMATICS

Midterm Practice Test Answer Key

Name: _____

Student Number: _____

Attending Non-Attending

Phone Number: _____

Address: _____

For Marker's Use Only

Date: _____

Final Mark: _____ / 100 = _____ %

Comments: _____

Instructions

The midterm examination is based on Modules 1 to 3 of the Grade 11 Essential Mathematics course. It is worth 12.5% of your final mark in this course.

Time

You will have a maximum of **2.5 hours** to complete the midterm examination.

Format

The format of the examination will be as follows:

Part A: Multiple Choice	10 marks
Part B: Definitions	10 marks
Part C: Long Answer	80 marks
Total	<u>100 marks</u>

(see over)

Instructions (continued)

Resources Provided

- an amortization table is included at the end of this examination

Resources Required (Not Provided)

To complete this examination, you will need:

- pens/pencils (2 or 3 of each)
- blank paper
- scientific or graphing calculator
- geometry set (including a ruler, a protractor, and a compass)
- Midterm Exam Resource Sheet (The Midterm Exam Resource Sheet must be handed in with the exam. You will receive your Midterm Exam Resource Sheet back from your tutor/marker with the next module that is submitted for marking.)

Notes

For Part C

- show all calculations and formulas
 - include units where appropriate
 - clearly state your final answer
 - diagrams may not be drawn to scale
-

Name: _____

Part A: Multiple Choice ($10 \times 1 = 10$ marks)

Circle the letter of the best answer for each question.

1. Draco invests \$5000. Approximately how long will it take for the investment to double if the rate is 10% compounded annually?

- a) 8 years
- b) 7 years
- c) 720 years
- d) 7 months

(Module 1, Lesson 2)

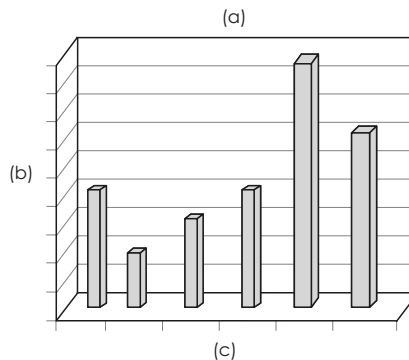
2. If the volume of a prism is 30 m^3 , what is the volume of a pyramid with the same dimensions?

- a) 10 m^3
- b) 15 m^3
- c) 60 m^3
- d) 90 m^3

(Module 2, Lesson 3)

3. Which axis is the qualitative axis?

- a)
- b)
- c)



(Module 3, Lesson 2)

4. Which of the following is not a step in getting out of debt?

- a) Stop using your credit cards
- b) Consolidate your debts
- c) Do not tell anyone you are in debt
- d) Cash in some of your investments

(Module 1, Lesson 7)

5. How much is the volume of a rectangular prism changed when you double one dimension?
- a) The volume stays the same.
 - b) The volume is multiplied by 4.
 - c) The volume is doubled.
 - d) The volume is multiplied by 8.
- (Module 2, Lesson 4)
6. Which is the most cost-efficient way to pay for a big ticket item?
- a) buy now, pay later
 - b) installment buying
 - c) personal loan
 - d) cash
- (Module 1, Lesson 5)
7. The surface area of a sphere is 25 cm^2 . Convert this to mm^2 .
- a) 2.5 mm^2
 - b) 2.5 mm^3
 - c) 0.25 mm^2
 - d) 2500 mm^2
- (Module 2, Lesson 2)
8. Which type of credit should Danuwa use to pay for his university costs when he moves to Toronto to go to university?
- a) credit card
 - b) overdraft protection
 - c) personal line of credit
 - d) consumer loan
- (Module 1, Lesson 3)
9. Devdas invests \$4600 for eight years. The investment earns 5% in simple interest. How much interest will Devdas earn on the investment?
- a) \$1840
 - b) \$184 000
 - c) \$11 500
 - d) \$115
- (Module 1, Lesson 1)

Name: _____

10. The volume of a prism is 5184 in.^3 . What is the volume in cubic feet?

- a) 432 ft.^3
- b) 36 ft.^3
- c) $62\,208 \text{ ft.}^3$
- d) 3 ft.^3

(Module 2, Lesson 3)

Part B: Definitions ($10 \times 1 = 10$ marks)

Match each definition with the correct term from the list below. Write the correct term on the line below each definition. Terms are used only once. Not all terms have a definition provided.

bar graph buy now, pay later capacity carrying charge circle graph composite compound interest cone consumer loans	continuous credit credit card cylinder dependent discrete extrapolation faces approach high risk	histogram independent installment buying installment price interpolation line graph low risk net overdraft protection	personal line of credit prism pyramid referent simple interest sphere surface area volume
--	--	---	--

- Data that can be sorted into well defined categories. discrete
(Module 3, Lesson 1)
- Purchasing by paying the taxes upfront but waiting to pay the cost of the item at a later time. buy-now, pay-later (Module 1, Lesson 5)
- Calculate surface area by adding the area of each surface. faces approach
(Module 2, Lesson 1)
- Investment whose interest rate does not vary much. low risk
(Module 1, Lesson 2)
- A 3-D object that has a polygon base and triangular sides that share a common vertex.
pyramid (Module 2, Lesson 1)
- A graph that relates independent and dependent variables. line graph
(Module 3, Lesson 4)
- Credit given as a large amount of money, and you are charged interest on the *entire* amount. consumer loans (Module 1, Lesson 3)
- In a relationship, the variable that is affected by the other. dependent
(Module 3, Lesson 4)
- A 3-D object that has two circular faces joined by a rectangular face that wraps around the circumference of the two circles. cylinder (Module 2, Lesson 1)
- Borrowing money with the promise to pay it back. credit
(Module 1, Lesson 3)

Name: _____

Part C: Long Answer (80 marks)

Show all formulas and calculations used to answer each question. Write your final answers rounded to the number of decimal places indicated in the questions. Include units where appropriate. Clearly state your final answer.

Module 1: Interest and Credit (38 marks)

1. Drazan takes out a short-term loan of \$7300 from his financial institution. He repays the loan 21 days later. If he pays \$49.35 in interest charges, calculate the rate of interest he is charged. Write your answer as a percentage rounded to the nearest whole number. (3 marks)

Answer:

$$I = \$49.35, P = \$7300, r = ?, t = 21 \text{ days} \div 365 = 0.05753 \text{ years (1 mark)}$$

$$I = Prt$$

$$r = \frac{I}{Pt}$$

$$= \frac{49.35}{(7300 \times 0.05753)}$$

$$= \frac{49.35}{420} \quad (1 \text{ mark})$$

$$= 0.1175$$

The interest rate would be $11.75 \approx 12\%$. (1 mark)

(Module 1, Lesson 1)

2. Due South has \$100,000 to invest for a period of five years. Institution A offers him an interest rate of 7% compounded semi-annually. Institution B offers him an interest rate of $6\frac{1}{2}\%$ compounded monthly.

- a) Using the compound interest formula, calculate which institution offers Due South a better return on his investment. (5 marks)

Answer:

Institution A

$$A = ?, P = \$100,000, r = 0.07, n = 2, t = 5$$

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

$$A = 100,000\left(1 + \frac{0.07}{2}\right)^{2 \times 5} \quad (1 \text{ mark})$$

$$= 100,000(1 + 0.035)^{10}$$

$$= 100,000(1.035)^{10}$$

$$= 100,000 \times 1.410659876$$

$$= \$141,059.88 \quad (1 \text{ mark})$$

Institution B

$$A = ?, P = \$100,000, r = 0.065, n = 12, t = 5$$

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

$$A = 100,000\left(1 + \frac{0.065}{12}\right)^{12 \times 5} \quad (1 \text{ mark})$$

$$= 100,000(1 + 0.005417)^{60}$$

$$= 100,000(1.005417)^{60}$$

$$= 100,000 \times 1.38281732$$

$$= \$138,281.73 \quad (1 \text{ mark})$$

Institution A offers Due South a better return on his investment. (1 mark)

- b) How much more interest could be earned by investing in the institution that offers a better return? (1 mark)

Answer:

Difference: $\$141,059.88 - \$138,281.73 = \$2,778.15$ more could be earned by investing with Institution A.

(Module 1, Lesson 2)

Name: _____

3. Demelza invests \$12,000 for eight years. At the end of eight years, her investment is worth \$24,000.

a) Use the rule of 72 to estimate the interest rate Demelza receives. (1 mark)

Answer:

$$rt = 72$$

$$r = \frac{72}{t}$$

$$= \frac{72}{8} = 9\%$$

b) Use the compound interest formula to determine the actual value of \$12,000 compounded annually for eight years at the interest rate you found in part (a). (2 marks)

Answer:

$$A = P \left(1 + \frac{r}{n} \right)^{nt}$$

$$A = 12,000 \left(1 + \frac{0.09}{1} \right)^{1 \times 8} \quad (1 \text{ mark})$$

$$= 12,000(1 + 0.09)^8$$

$$= 12,000(1.09)^8$$

$$= 12,000(1.9926)$$

$$= \$23,910.75 \quad (1 \text{ mark})$$

c) Determine the difference between the actual value of the investment after eight years and the doubled value found with the rule of 72. (1 mark)

Answer:

$$\text{Difference: } \$24,000 - \$23,910.75 = \$89.25$$

(Module 1, Lesson 2)

d) Is the rate you found in part (a) approximately correct? Explain why. (2 marks)

Answer:

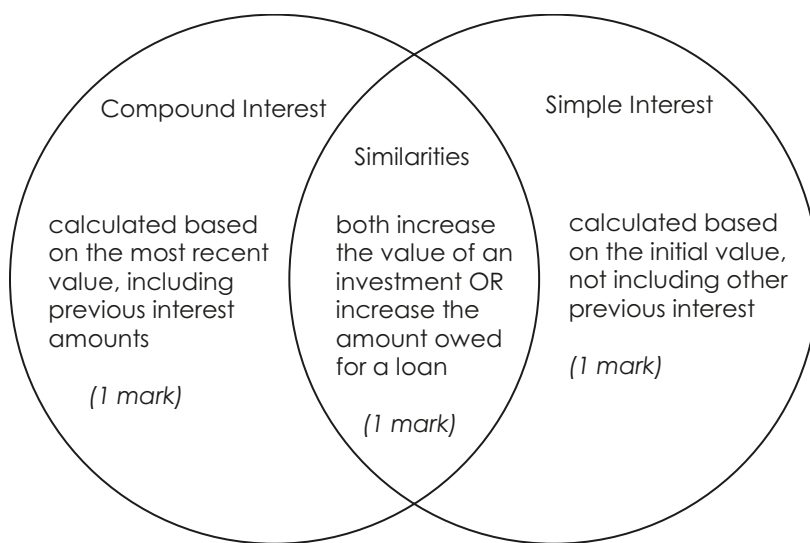
9% is approximately correct because when we applied the compound interest formula using 9%, we got approximately the same answer.

Note: \$89.25 may seem like a lot of money, but remember that you are comparing values that are over \$20 000. \$90 is less than half of 1% of \$20,000.

4. Complete the Venn Diagram below, comparing compound and simple interest. (3 marks)

Answer:

Answers will vary. Here is one possible answer.



(Module 1, Lesson 2)

5. Doneshia needs a loan from the bank to pay for a car that costs \$14 000. If Doneshia pays \$450.10 per month toward the loan, what are the interest rate and term of the loan? (2 marks)

Answer:

Number of \$1000 dollar units: $14\ 000 \div 1000 = 14$

Monthly payment per \$1000: $\$450.10 \div 14 = \32.15 per month

Find this value in your amortization table.

Row: The interest rate is 9.75%

Column: The term is three years.

(Module 1, Lesson 4)

Name: _____

6. List the three questions you should ask yourself when deciding whether to save money by paying cash now, or whether to use a sales promotion (buy now, pay later, or installment buying) to buy an expensive item like a computer. (3 marks)

Answer:

1. Do you have enough money to pay cash now?
2. Do you need the item immediately?
3. Can you save enough money to pay cash for it within six months?

(Module 1, Lesson 5)

7. On October 5th, DuHo uses a credit card to make a purchase for \$163.16. The purchase appears on his monthly statement issued October 20th. DuHo doesn't pay for the purchase by the due date indicated on the October statement. His next monthly statement is issued November 20th. Calculate the interest he is charged for the purchase on his November statement. Assume his lending institution charges him an annual interest rate of 18.25%. Assume that he is charged interest from the date of purchase. (4 marks)

Answer:

October 5 until November 20th = 47 days

$I = Prt$

$$= 163.16 \times 0.1825 \times \frac{47}{365}$$

$$= \$3.83$$

DuHo will be charged \$3.83 interest on his purchase.

(Module 1, Lesson 6)

8. The balance on Duong's credit card statement is \$1435.86. The minimum payment on the statement is 5% of the statement total or \$10, whichever is greater. How much will the minimum payment be on Duong's statement? (2 marks)

Answer:

5% of \$1435.86 = 71.793 \approx \$71.79 (1 mark)

Duong's minimum payment will be \$71.79. (1 mark)

(Module 1, Lesson 6)

9. Daniela is buying a dining room set. The cash price of the dining room set is \$2799 plus taxes. The installment terms are \$100 down plus \$90 per month for three years. The monthly payment includes taxes.

a) Calculate the cash selling price of the dining room set. (2 marks)

Answer:

$$\text{PST} = 2799 \times 0.07 \text{ or } \$195.93 \quad (1 \text{ mark})$$

$$\text{GST} = 2799 \times 0.05 \text{ or } \$139.95$$

$$\text{Cash selling price} = 2799 + 195.93 + 139.95 = \$3134.88 \quad (1 \text{ mark})$$

b) Calculate the installment price of the dining room set. (3 marks)

Answer:

$$\text{Number of payments} = 3 \text{ years or } 36 \text{ months} \quad (1 \text{ mark})$$

$$\text{Total value of monthly payments} = 90 \times 36 = \$3240 \quad (1 \text{ mark})$$

$$\text{Total} = 3240 + 100 = \$3340 \quad (1 \text{ mark})$$

Installment price is \$3340.

c) Calculate the percent rate of the finance charge compared to the cash selling price. (2 marks)

Answer:

$$\text{Finance charge} = 3340.00 - 3134.88 = \$205.12 \quad (1 \text{ mark})$$

$$\text{Percent rate} = \frac{205.12}{3134.88} \times 100 = 6.54 \quad (1 \text{ mark})$$

Percent rate of finance charge is 6.5%.

(Module 1, Lesson 5)

10. Complete the table below by stating one advantage and one disadvantage for each type of credit listed. (2 marks)

Answer:

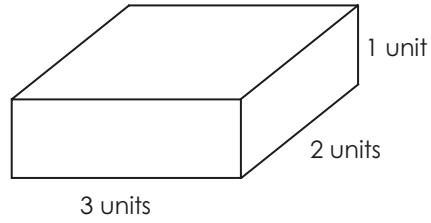
	Advantage	Disadvantage
Overdraft (1 mark)	It allows you to spend slightly more than you have, protecting your credit score.	You may not realize that you have gone over your limit, and some companies charge you for overdraft.
Line of Credit (1 mark)	You only have to pay interest on the money that you use.	You usually have to provide assets as security.

(Module 1, Lesson 3)

Name: _____

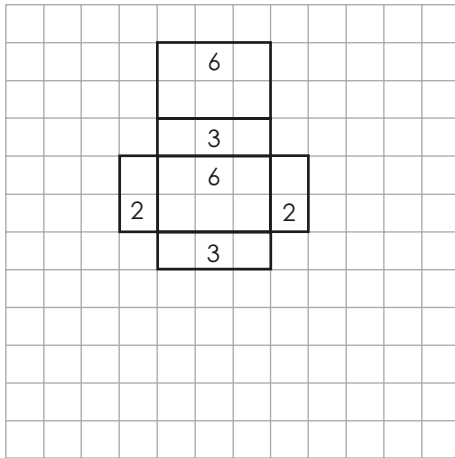
Module 2: 3-D Geometry (26 marks)

1. Find the surface area of the object using a net. (3 marks)



Answer:

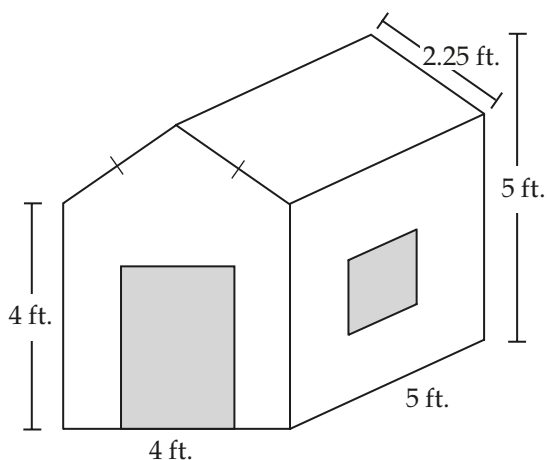
(2 marks for the net, 1 mark for the surface area)



Area: $6 + 6 + 3 + 3 + 2 + 2 = 22$ units². (units must be squared)

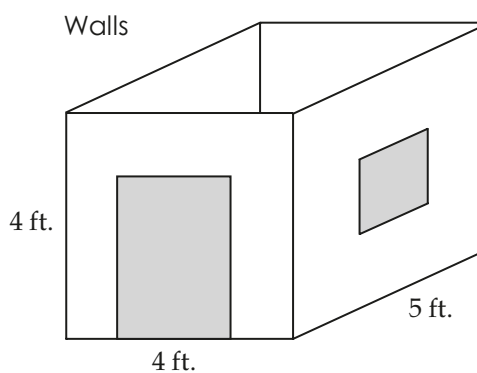
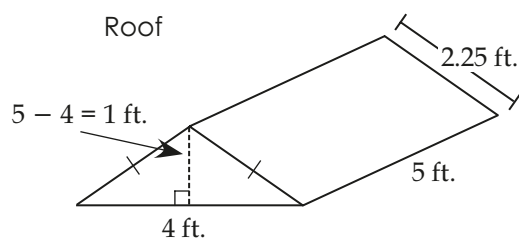
(Module 2, Lesson 1)

2. You have finished building a treehouse with a doorway (2 ft. wide and 3 ft. tall) and a window opening (1 ft. by 1 ft.). Now you would like to paint the outside, including the bottom. You have enough paint to cover 100 ft.². Will you need more paint? Explain. (10 marks)



Answer:

You may want to break apart the shapes, since this is a composite object.



Triangular prism

front/back:

$$SA = \frac{1}{2}bh$$

$$= \frac{1}{2}(4)(1) = 2 \text{ ft.}^2 \text{ each}$$

sides:

$$SA = lw$$

$$= (5)(2.25) = 11.25 \text{ ft.}^2 \text{ each} \quad (2 \text{ marks})$$

Name: _____

Rectangular Prism

front/back (not including door):

$$SA = lh$$
$$= (4)(4) = 16 \text{ ft.}^2 \text{ each}$$

sides (not considering window):

$$SA = wh$$
$$= (5)(4) = 20 \text{ ft.}^2 \text{ each}$$

bottom:

$$SA = lw$$
$$= (4)(5) = 20 \text{ ft.}^2 \quad (3 \text{ marks})$$

$$\text{Door: } 2 \times 3 = 6 \text{ ft.}^2$$

$$\text{Window: } 1 \times 1 = 1 \text{ ft.}^2$$

$$\text{Total area not needing painting} = 6 + 1 = 7 \text{ ft.}^2 \quad (2 \text{ mark})$$

$$\text{Total} = 2(2) + 2(11.25) + 2(16) + 2(20) + 20 - 7$$
$$= 111.5 \text{ ft.}^2 \quad (2 \text{ mark})$$

No, I do not have enough paint to cover the treehouse. (1 mark)

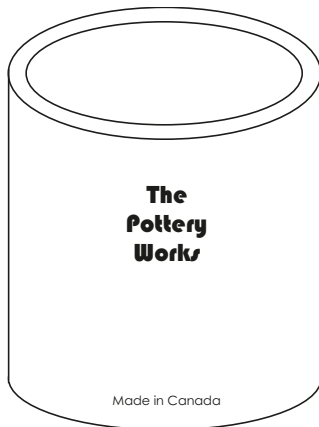
(Module 2, Lesson 2)

3. Complete the table comparing volume and capacity. (3 marks)

How Are They Different?	
Volume	Capacity
<ul style="list-style-type: none">units are cm^3, m^3, ft.^3, in.^3, etc.describes the amount of space an object takes up	<ul style="list-style-type: none">units are mL, L, cups, quarts, gallons, etc.describes the amount that an object can hold/contain
How Are They Alike?	
<ul style="list-style-type: none">describes 3-D objectsare sometimes used interchangeably (not necessary for full marks)	

(Module 2, Lesson 5)

4. A cylindrical clay pot has a capacity of 2617 in.^3 . The side wall and the bottom of the pot are 1 inch thick, and the outside height of the pot is 1.5 feet.



- a) Calculate the outside diameter of the pot. Write your answer in inches rounded to one decimal place. (4 marks)

Answer:

Outside height: $1.5 \text{ ft.} = 1.5 \times 12 = 18 \text{ in.}$

Inside height: $18 \text{ in.} - 1 \text{ in.} = 17 \text{ in.}$ (1 mark)

Capacity = $\pi r^2 h$

$2617 = \pi r^2 (17)$ (1 mark)

$$\frac{2617}{(17\pi)} = \frac{17\pi r^2}{(17\pi)}$$

$$49 = r^2$$

$$7 = r \quad (1 \text{ mark})$$

Inside diameter = $2(7) = 14 \text{ in.}$

Outside diameter: $2(7) + 2(1) = 16 \text{ in.}$ (1 mark)

Name: _____

- b) Calculate the volume of water in the pot if it is filled to three inches below the top edge. Write your answer in litres, rounded to one decimal place. Note some conversion factors: 1 litre = 61 in.³, and 1 ft.³ = 28.3 L. (3 marks)

Answer:

Inside height of pot: 18 in. - 1 in. = 17 in.

Depth of water: 17 in. - 3 in. = 14 in. (1 mark)

$$V = \pi r^2 h$$

$$= \pi(7)^2(14)$$

$$= 2155.13 \text{ in.}^3 \quad (1 \text{ mark})$$

Using: 1 L = 61 in.³

$$61 \text{ in.}^3 = 1 \text{ L}$$

$$1 \text{ in.}^3 = \frac{1}{61} \text{ L}$$

$$2155.13 \text{ in.}^3 = \left(\frac{1}{61}\right) 2155.13 \text{ L}$$

$$= 35.33 \text{ L}$$

The volume of water = 35.3 L (1 mark)

OR

Using: 1 ft.³ = 28.3 L

$$\text{Volume: } 2155.13 \text{ in.}^3 = \left(\frac{2155.13}{12^3}\right) \text{ ft.}^3$$

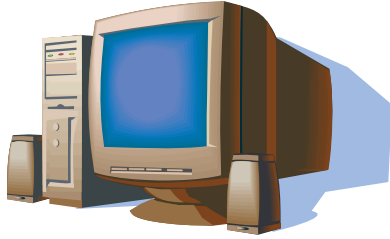
$$= 1.24718 \text{ ft.}^3$$

Volume: 1.24718 ft.³ = (1.24718 × 28.3) L = 35.3 L

The volume of water = 35.3 L

(Module 2, Lesson 5)

5. You are trying to find the surface area of your computer screen and you do not have any measuring tape or ruler. You decide to use a referent to measure the screen.



- a) State what you would use as a referent. (1 mark)

Answer:

Answers may vary. Some possibilities: computer paper, paper clip, width of hand, length of computer mouse (around 10 cm), etc.

- b) Explain how you would use the referent to estimate the surface area of your computer screen. (2 marks)

Answer:

Answers may vary. For example, to use a piece of computer paper, you could estimate the height of the screen by comparing it to the height of the paper, and estimate the width of the screen by seeing how many widths of paper would fit across. Since we know that height and width of computer paper (11 by 8.5 inches), you can then approximate the surface area because you know the approximate dimensions.

(Module 2, Lesson 2)

Name: _____

Module 3: Statistics (16 marks)

1. Dakota is a member of the student council and is organizing the pizza lunch for all the council members. At the last meeting, the secretary surveyed everyone to find out what kind of pizza they like to eat. The following data was collected.

Pepperoni – 5

Cheese – 8

Hawaiian – 3

Vegetarian – 3

Meat Lovers – 7

Draw a circle graph to represent the data. Be sure to include a title and all the appropriate labels. (13 marks)

Answer:

Total members: $5 + 8 + 3 + 3 + 7 = 26$

Percents (3 marks for total and percents)

$$\text{pepperoni} = \frac{5}{26} = 19\%$$

$$\text{cheese} = \frac{8}{26} = 31\%$$

$$\text{Hawaiian} = \frac{3}{26} = 12\%$$

$$\text{vegetarian} = \frac{3}{26} = 12\%$$

$$\text{meat lovers} = \frac{7}{26} = 27\%$$

Note: This adds up to 101%, so students should choose one number to round down (e.g., cheese = 30%). (½ mark for checking totals, rounding)

Angles ($\frac{1}{2}$ mark each)

$$\text{pepperoni} = 0.19 \times 360^\circ = 68^\circ$$

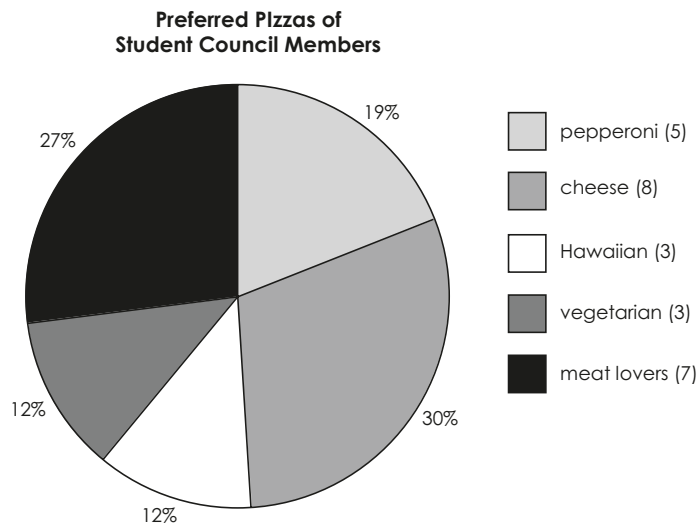
$$\text{cheese} = 0.30 \times 360^\circ = 108^\circ$$

$$\text{Hawaiian} = 0.12 \times 360^\circ = 43^\circ$$

$$\text{vegetarian} = 0.12 \times 360^\circ = 43^\circ$$

$$\text{meat lovers} = 0.27 \times 360^\circ = 97^\circ$$

Note: This adds up to 359° , so whatever was rounded down in the previous step (cheese) should be rounded up now (e.g., cheese = 109°). ($\frac{1}{2}$ mark for checking totals, rounding)



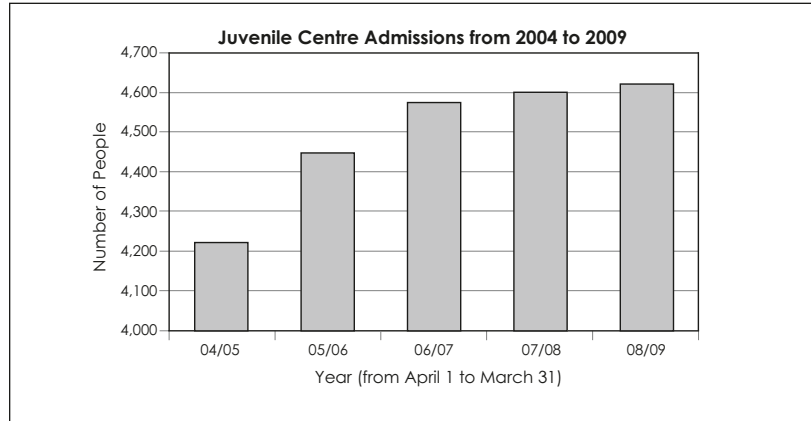
(1 mark for title, 1 mark for legend, 1 mark for data in the legend, 1 mark for % labels, $\frac{1}{2}$ mark for each angle – accurate to within 1 degree)

(Module 3, Lesson 1)

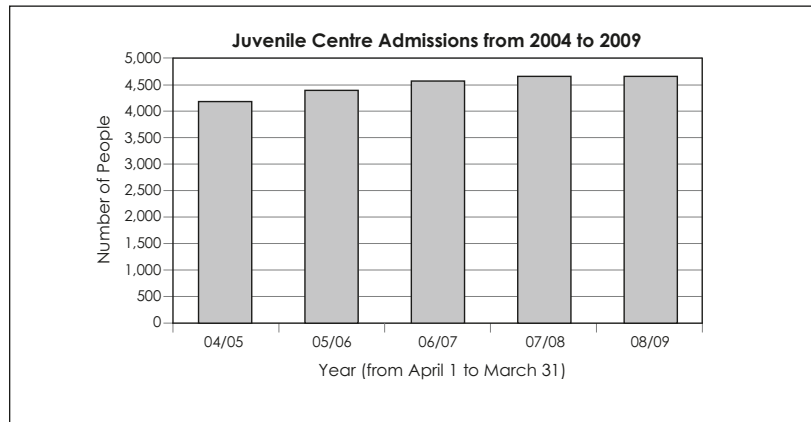
Name: _____

2. Use the Statistics Canada data depicted in the following graphs to answer the questions below.

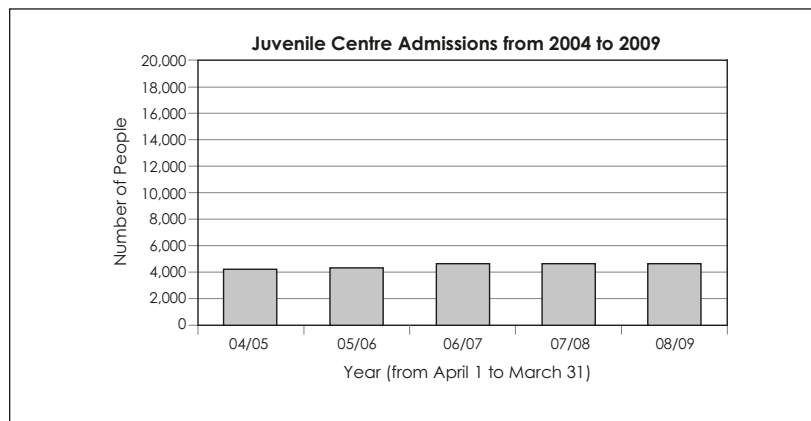
Graph A:



Graph B:



Graph C:



- a) After a number of crimes are committed at local schools, the media is suggesting that harsher punishments are necessary to reduce the increasing amount of juvenile crime. Which graph would support this argument best? Explain why. (2 marks)

Answer:

Graph A – Because the vertical scale is so small, the change from one year to another appears quite large. This would help support the media’s claim because it makes it seem as though youth crime is increasing by a lot each year. In fact, the largest growth is only (approximately) 200. This may seem like a lot, but $\frac{200}{4200}$ is less than 5%.

Graph B would not be as effective because, although it makes the number of admissions look high, it does not appear to be increasing greatly.

Graph C would not be effective because the bars are short (so it looks like there is little juvenile crime) and they do not seem to increase by very much.

- b) Which graph is the most “honest” graph because it does not present the data in a distorted way? (1 mark)

Answer:

Graph B

(Module 3, Lesson 5)

Name: _____

Amortization Table					
Amortization Period					
Monthly Payment Per \$1000 Loan Proceeds					
Annual Rate	1 Year Monthly	2 Years Monthly	3 Years Monthly	4 Years Monthly	5 Years Monthly
6.00%	\$86.07	\$44.33	\$30.43	\$23.49	\$19.34
6.25%	\$86.18	\$44.44	\$30.54	\$23.61	\$19.46
6.50%	\$86.30	\$44.56	\$30.66	\$23.72	\$19.57
6.75%	\$86.41	\$44.67	\$30.77	\$23.84	\$19.69
7.00%	\$86.53	\$44.78	\$30.88	\$23.95	\$19.81
7.25%	\$86.64	\$44.89	\$31.00	\$24.07	\$19.93
7.50%	\$86.76	\$45.01	\$31.11	\$24.19	\$20.05
7.75%	\$86.87	\$45.12	\$31.23	\$24.30	\$20.16
8.00%	\$86.99	\$45.24	\$31.34	\$24.42	\$20.28
8.25%	\$87.10	\$45.34	\$31.45	\$24.53	\$20.40
8.50%	\$87.22	\$45.46	\$31.57	\$24.65	\$20.52
8.75%	\$87.34	\$45.57	\$31.68	\$24.71	\$20.64
9.00%	\$87.45	\$45.68	\$31.80	\$24.89	\$20.76
9.25%	\$87.57	\$45.80	\$31.92	\$25.00	\$20.88
9.50%	\$87.68	\$45.91	\$32.03	\$25.12	\$21.00
9.75%	\$87.80	\$46.03	\$32.15	\$25.24	\$21.12
10.00%	\$87.92	\$46.14	\$32.27	\$25.36	\$21.25
10.25%	\$88.03	\$46.26	\$32.38	\$25.48	\$21.37
10.50%	\$88.15	\$46.38	\$32.50	\$25.60	\$21.49
10.75%	\$88.27	\$46.49	\$32.62	\$25.72	\$21.62
11.00%	\$88.38	\$46.61	\$32.74	\$25.85	\$21.74
11.25%	\$88.50	\$46.72	\$32.86	\$25.97	\$21.87
11.50%	\$88.62	\$46.84	\$32.98	\$26.09	\$21.99
11.75%	\$88.73	\$46.96	\$33.10	\$26.21	\$22.12
12.00%	\$88.85	\$47.07	\$33.21	\$26.33	\$22.24
12.25%	\$88.97	\$47.19	\$33.33	\$26.46	\$22.37
12.50%	\$89.08	\$47.31	\$33.45	\$26.58	\$22.50
12.75%	\$89.20	\$47.42	\$33.57	\$26.70	\$22.63
13.00%	\$89.32	\$47.54	\$33.69	\$26.83	\$22.75
13.25%	\$89.43	\$47.66	\$33.81	\$26.95	\$22.88
13.50%	\$89.55	\$47.78	\$33.94	\$27.08	\$23.01
13.75%	\$89.67	\$47.89	\$34.06	\$27.20	\$23.14
14.00%	\$89.79	\$48.01	\$34.18	\$27.33	\$23.27

