

G12 Ma F FINAL REVIEW

- _____ 1. (3 points)
Determine the future value of quarterly payments of \$1000 into an account that pays 5.1% interest, compounded quarterly, for 19 years.
- A. \$126 997.25
 - B. \$133 347.11
 - C. \$122 552.35
 - D. \$123 822.32
- _____ 2. (3 points)
Determine the regular monthly payment required to have \$5000 at the end of 4 years if the investment earns 5.3% interest, compounded monthly.
- A. \$89.61
 - B. \$95.22
 - C. \$86.03
 - D. \$93.74

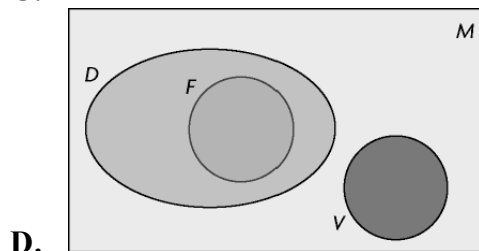
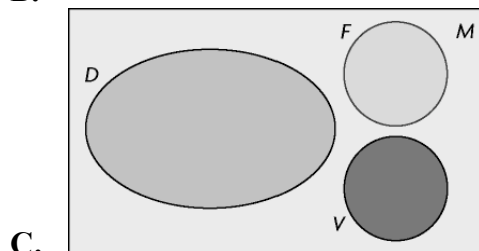
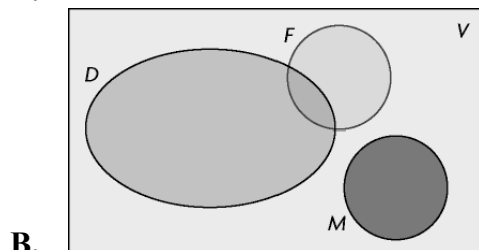
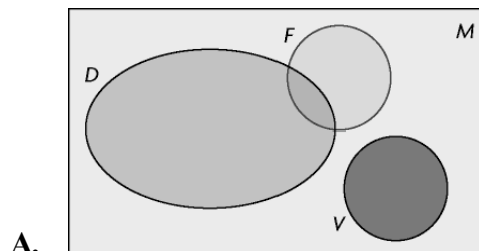
3. (3 points)

Which Venn diagram correctly represents the situation described?

Rahim described the set as follows:

- $M = \{\text{all of the foods he eats}\}$
- $D = \{\text{his favourite desserts}\}$
- $V = \{\text{his favourite vegetables}\}$
- $F = \{\text{his favourite fruits}\}$

Assume Rahim likes some fruit for dessert.



4. (4 points)

Benjamin wants to buy a new clarinet in 3 years, when he turns 24. He deposits \$30 every month in a savings account that earns 2.6%, compounded monthly. How much money will he have for his clarinet when he is 24?

5. (4 points)

Mr. McSherry's physics class is visiting the local amusement park. He has 33 students. Of these students, 21 plan to ride the roller coaster and 12 plan to ride the vertical drop. There are 7 students who do not plan to ride either attraction.

Determine how many students plan to ride only the roller coaster.

6. (3 points)

Evaluate.

$$\frac{8!}{6!} - 2!$$

7. (2 points)

Evaluate.

$$11 \cdot 10 \cdot 9!$$

8. (2 points)

Evaluate.

$$\frac{5!}{6!}$$

9. (2 points)

Evaluate.

$$4! \cdot 3! \cdot 2!$$

Name: _____

ID: A

10. (4 points)

Russell needs to buy supplies for his business. To pay for these supplies, Russell wants to take out a loan at 3.6%, compounded monthly, that will be repaid in 3 years. In order to earn a profit, Russell needs to pay back \$6100 to pay off the loan.

a) How much money can Russell borrow? Show your work.

b) How much interest will Russell have to pay? Show your work.

11. (8 points)

Rajon is buying a new couch that costs \$2200. He plans to pay off the debt by making regular monthly payments and he is considering the following two credit options:

- Finance the purchase through the store at an interest rate of 6.2%, compounded monthly, for a term of 2 years.
- Finance the purchase with a bank loan that charges an interest rate of 5.4%, compounded monthly, for a term of 4 years.

a) What are the monthly payments for both options? Show your work.

b) How much interest will each option charge? Show your work.

Name: _____

ID: A

12. (6 points)

Guy needs a helicopter for his job as a pilot for a company that offers helicopter tours. He can lease a helicopter on a 3 year contract for \$300 per week and a down payment of \$7500. He can purchase a new helicopter for \$115 000, which would be financed with a bank loan at an interest rate of 6.1%, compounded monthly, and would require a down payment of \$10 000. He would pay off this loan in 6 years with regular monthly payments. After the 6 years the helicopter will be worthless. He can also rent a helicopter at \$110 per day. He only needs the helicopter 5 days a week.

- a) If Guy needs a helicopter for 6 years, what is the total cost of leasing a helicopter? Show your work.
- b) What is the total cost of purchasing a helicopter? Show your work.
- c) What is the total cost of renting a helicopter for 6 years? Show your work.

13. (5 points)

Consider this universal set:

$A = \{A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z\}$

a) List the following subsets:

• $C = \{\text{letters that are consonants}\}$

• $V = \{\text{letters that are vowels}\}$

b) Represent the universal set and subsets in a Venn diagram.

c) Are C and V are disjoint sets? Explain.

_____ 14. (1 point)

Julie draws a card at random from a standard deck of 52 playing cards. Determine the odds in favour of the card being a heart.

A. 3 : 1

B. 1 : 3

C. 1 : 1

D. 3 : 13

_____ 15. (1 point)

Raymond has 12 coins in his pocket, and 9 of these coins are quarters. He reaches into his pocket and pulls out a coin at random. Determine the probability of the coin being a quarter.

A. 0.250

B. 0.333

C. 0.750

D. 0.848

- _____ 16. (1 point)
Nine boys and twelve girls have signed up for a trip. Only six students will be selected to go on the trip. Determine the number of ways in which there can be more girls than boys on the trip.
- A. 17 456
B. 25 872
C. 29 778
D. 35 910
- _____ 17. (1 point)
Jake and Agnes are playing a board game. If a player rolls a sum greater than 9 or a multiple of 6, the player gets a bonus of 50 points. Determine the probability of rolling a multiple of 6.
- A. $\frac{1}{18}$
B. $\frac{1}{9}$
C. $\frac{1}{6}$
D. $\frac{1}{3}$
- _____ 18. (1 point)
Julio rolls a regular six-sided red die and a regular six-sided black die. If the red die lands on 3 and the sum of the two dice is greater than 5, Julio wins a point. Determine the probability that Julio will win a point.
- A. $\frac{1}{9}$
B. $\frac{1}{6}$
C. $\frac{1}{2}$
D. $\frac{2}{3}$
- _____ 19. (1 point)
A four-sided red die and a six-sided green die are rolled. Determine the probability of rolling a 2 on the red die and a 5 on the green die.
- A. 4.17%
B. 4.89%
C. 6.50%
D. 8.04%

20. (1 point)

The distance a marathon runner covers can be modelled by the function

$$d(t) = 153.8t + 86$$

where d represents the distance in metres and t represents the time in minutes.

Approximately how far has she run after the first hour?

- A. 93 km
- B. 3 km
- C. 14 km
- D. 9 km

21. (1 point)

The path of a shot put thrown at a track and field meet is modelled by the quadratic function

$$h(d) = -0.048(d^2 - 20.7d - 26.28)$$

where h is the height in metres and d is the horizontal distance in metres.

Determine the height of the discus when it has travelled 10 m horizontally.

- A. 6.2 m
- B. 6.4 m
- C. 6.6 m
- D. 6.8 m

22. (1 point)

Determine the equation of the quadratic regression function for the data.

x	10	11	12	13	14	15	16	17
y	156	135	128	123	134	147	170	203

- A. $y = 4.2x^2 - 107x + 803.5$
- B. $y = 4.2x^2 - 107x + 508.5$
- C. $y = -4.2x^2 - 107x + 803.5$
- D. $y = -4.2x^2 - 107x + 508.5$

23. (1 point)

Determine the equation of the exponential regression function for the data.

x	0	1	2	3	4	5
y	3.5	5.6	9.0	14.2	23.1	36.7

- A. $y = 3.5(1.6)^x$
- B. $y = 2.2(1.6)^x$
- C. $y = 3.5(1.8)^x$
- D. $y = 3.5(0.8)^x$

_____ 24. (1 point)
Which function will have the fastest increase in the y -values?

- A. $y = \frac{1}{2} \log x$
- B. $y = 3 \log x$
- C. $y = -\frac{1}{5} \log x$
- D. $y = -5 \log x$

_____ 25. (1 point)
Which function will have the fastest decrease in the y -values?

- A. $y = -\frac{1}{2} \log x$
- B. $y = -2 \log x$
- C. $y = -\log x$
- D. $y = -5 \log x$

_____ 26. (1 point)
Choose the best estimate for 120° in radians.

- A. 2.1
- B. 0.7
- C. 2.8
- D. 3.1

_____ 27. (1 point)
Choose the best estimate for 136° in radians.

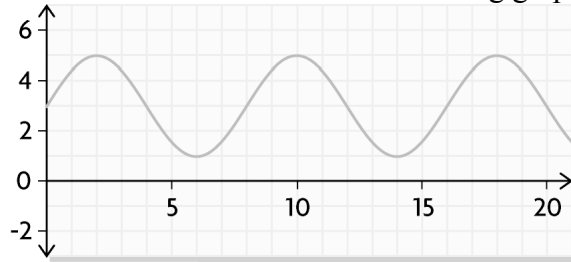
- A. $\frac{3}{2} \pi$
- B. $\frac{3}{4} \pi$
- C. $\frac{3}{8} \pi$
- D. $\frac{2}{3} \pi$

_____ 28. (1 point)
Choose the best estimate for 0.1 radians in degrees.

- A. 0.5°
- B. 1°
- C. 3°
- D. 6°

29. (1 point)

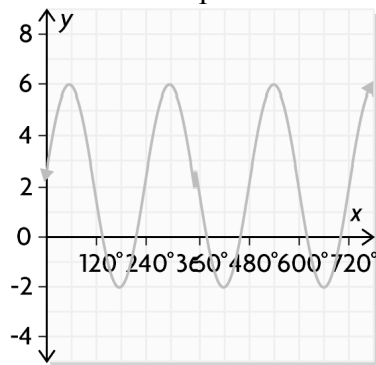
Determine the midline of the following graph.



- A. $y = 2$
- B. $y = 3$
- C. $y = 4$
- D. $y = 5$

30. (1 point)

Determine the period of the following graph.



- A. 120°
- B. 240°
- C. 300°
- D. 360°

31. (1 point)

Determine the amplitude of the following function.

$$y = 3 \sin 2(x + 90^\circ) - 1$$

- A. 2
- B. 3
- C. 4
- D. 5

Name: _____

ID: A

- _____ 32. (1 point)
Determine the midline of the following function.
 $y = 0.5 \sin (x - 2)$

- A. $y = -2$
- B. $y = 0.5$
- C. $y = 0$
- D. $y = 2$

G12 Ma F FINAL REVIEW**Answer Section**

1. ANS: A PTS: 3 DIF: Grade 12 REF: Lesson 1.5
 OBJ: 3.2 Determine, using technology, the total value of an investment when there are regular contributions to the principal. | 3.5 Determine, using technology, possible investment strategies to achieve a financial goal. | 3.8 Solve an investment problem.
 TOP: Investments involving regular payments
 KEY: compound interest | future value
2. ANS: D PTS: 3 DIF: Grade 12 REF: Lesson 1.5
 OBJ: 3.2 Determine, using technology, the total value of an investment when there are regular contributions to the principal. | 3.5 Determine, using technology, possible investment strategies to achieve a financial goal. | 3.8 Solve an investment problem.
 TOP: Investments involving regular payments
 KEY: compound interest | future value
3. ANS: D PTS: 3 DIF: Grade 12 REF: Lesson 3.1
 OBJ: 2.1 Provide examples of the empty set, disjoint sets, subsets and universal sets in context, and explain the reasoning. | 2.2 Organize information such as collected data and number properties, using graphic organizers, and explain the reasoning. | 2.3 Explain what a specified region in a Venn diagram represents, using connecting words (and, or, not) or set notation. | 2.4 Determine the elements in the complement, the intersection or the union of two sets. | 2.6 Identify and correct errors in a given solution to a problem that involves sets. | 2.7 Solve a contextual problem that involves sets, and record the solution, using set notation.
 TOP: Types of Sets and Set Notation KEY: set | element | subset | universal set
4. ANS:
 \$1121.97

 PTS: 4 DIF: Grade 12 REF: Lesson 1.5
 OBJ: 3.2 Determine, using technology, the total value of an investment when there are regular contributions to the principal. | 3.5 Determine, using technology, possible investment strategies to achieve a financial goal. | 3.8 Solve an investment problem.
 TOP: Investments involving regular payments
 KEY: compound interest | future value
5. ANS:
 There are 14 students who plan to ride only the roller coaster.

 PTS: 4 DIF: Grade 12 REF: Lesson 3.2
 OBJ: 2.2 Organize information such as collected data and number properties, using graphic organizers, and explain the reasoning. | 2.3 Explain what a specified region in a Venn diagram represents, using connecting words (and, or, not) or set notation. | 2.7 Solve a contextual problem that involves sets, and record the solution, using set notation.
 TOP: Exploring Relationships between Sets KEY: set | element

6. ANS:
54

PTS: 3 DIF: Grade 12 REF: Lesson 4.2

OBJ: 5.1 Represent the number of arrangements of n elements taken n at a time, using factorial notation. | 5.2 Determine, with or without technology, the value of a factorial. | 5.3 Simplify a numeric or algebraic fraction containing factorials in both the numerator and denominator. | 5.4 Solve an equation that involves factorials.

TOP: Introducing Permutations and Factorial Notation

KEY: permutation | factorial notation

7. ANS:
11! or 39 916 800

PTS: 2 DIF: Grade 12 REF: Lesson 4.2

OBJ: 5.1 Represent the number of arrangements of n elements taken n at a time, using factorial notation. | 5.2 Determine, with or without technology, the value of a factorial. | 5.3 Simplify a numeric or algebraic fraction containing factorials in both the numerator and denominator. | 5.4 Solve an equation that involves factorials.

TOP: Introducing Permutations and Factorial Notation

KEY: permutation | factorial notation

8. ANS:
 $\frac{1}{6}$

PTS: 2 DIF: Grade 12 REF: Lesson 4.2

OBJ: 5.1 Represent the number of arrangements of n elements taken n at a time, using factorial notation. | 5.2 Determine, with or without technology, the value of a factorial. | 5.3 Simplify a numeric or algebraic fraction containing factorials in both the numerator and denominator. | 5.4 Solve an equation that involves factorials.

TOP: Introducing Permutations and Factorial Notation

KEY: permutation | factorial notation

9. ANS:
288

PTS: 2 DIF: Grade 12 REF: Lesson 4.2

OBJ: 5.1 Represent the number of arrangements of n elements taken n at a time, using factorial notation. | 5.2 Determine, with or without technology, the value of a factorial. | 5.3 Simplify a numeric or algebraic fraction containing factorials in both the numerator and denominator. | 5.4 Solve an equation that involves factorials.

TOP: Introducing Permutations and Factorial Notation

KEY: permutation | factorial notation

10. ANS:

$$\text{a) } P = \frac{A}{(1+i)^n}$$

$$P = \frac{6100}{\left(1 + \frac{0.036}{12}\right)^{36}}$$

$$P = 5476.413\dots$$

Russell can borrow \$5476.41.

$$\text{b) } I = A - P$$

$$I = 6100 - 5476.413\dots$$

$$I = 623.586\dots$$

Russell will have to pay \$623.59 in interest.

PTS: 4 DIF: Grade 12 REF: Lesson 2.1

OBJ: 1.1 Explain the advantages and disadvantages of compound interest and simple interest. | 1.2 Identify situations that involve compound interest. | 1.3 Graph and compare, in a given situation, the total interest paid or earned for different compounding periods. | 1.4 Determine, given the principal, interest rate and number of compounding periods, the total interest of a loan. | 1.5 Graph and describe the effects of changing the value of one of the variables in a situation that involves compound interest. | 1.6 Determine, using technology, the total cost of a loan under a variety of conditions; e.g., different amortization periods, interest rates, compounding periods and terms. | 1.8 Solve a contextual problem that involves compound interest.

TOP: Analyzing loans

KEY: loans

11. ANS:

a) Store:

The present value is \$2200.

The regular payment amount is unknown.

The payments are made 12 times per year.

The number of payments is 12(2) or 24.

The payments are made at the end of the payment periods.

The annual interest rate is 6.2%.

The compounding frequency is 12 times per year.

The future value is \$0.

Using the financial application on a graphing calculator, the regular monthly payment amount will be 97.703..., or \$97.70.

If Rajon finances the purchase through the store, each monthly payment will be \$97.70.

Bank:

The present value is \$2200.

The regular payment amount is unknown.

The payments are made 12 times per year.

The number of payments is 12(4) or 48.

The payments are made at the end of the payment periods.

The annual interest rate is 5.4%.

The compounding frequency is 12 times per year.

The future value is \$0.

Using the financial application on a graphing calculator, the regular monthly payment amount will be 51.064..., or \$51.06.

If Rajon finances the purchase with the bank loan, each monthly payment will be \$51.06.

b) Store:

$$I = A - P$$

$$I = (24)(97.703...) - 2200$$

$$I = 144.889...$$

If Rajon finances the purchase through the store, he will have to pay \$144.89 in interest.

Bank:

$$I = A - P$$

$$I = (48)(51.064...) - 2200$$

$$I = 251.074...$$

If Rajon finances the purchase with the bank loan, he will have to pay \$251.07 in interest.

PTS: 8 DIF: Grade 12 REF: Lesson 2.3

OBJ: 1.2 Identify situations that involve compound interest. | 1.3 Graph and compare, in a given situation, the total interest paid or earned for different compounding periods. | 1.4 Determine, given the principal, interest rate and number of compounding periods, the total interest of a loan. | 1.5 Graph and describe the effects of changing the value of one of the variables in a situation that involves compound interest. | 1.7 Compare and explain, using technology, different credit options that involve compound interest, including bank and store

credit cards and special promotions. | 1.8 Solve a contextual problem that involves compound interest.

TOP: Solving problems involving credit KEY: loans

12. ANS:

a) Total cost = $2((300)(52)(3) + 7500)$

Total cost = 108 600

It would cost Guy \$108 600 to lease a helicopter.

b) The present value is \$115 000 – \$10 000, or \$105 000.

The regular payment amount is unknown.

The payment frequency is 12 times a year.

The number of payments is 6(12), or 72.

The payments are made at the end of the payment periods.

The annual interest rate is 6.1%.

The compounding frequency is 12 times a year.

The future value is \$0.

Using the financial application on a graphing calculator, the regular payment amount is 1745.113..., or \$1745.11.

Total cost = $(1745.113...)(72) + 10\ 000$

Total cost = 135 648.206...

It would cost Guy \$135 648.21 to purchase a helicopter.

c) Total cost = $(110)(5)(52)(6)$

Total cost = 171 600

It would cost Guy \$171 600 to rent a helicopter for 6 years.

PTS: 6 DIF: Grade 12 REF: Lesson 2.4

OBJ: 2.1 Identify and describe examples of assets that appreciate or depreciate. | 2.2

Compare, using examples, renting, leasing and buying. | 2.3 Justify, for a specific set of

circumstances, if renting, buying or leasing would be advantageous. | 2.4 Solve a problem

involving renting, leasing or buying that requires the manipulation of a formula. | 2.5 Solve,

using technology, a contextual problem that involves cost-and-benefit analysis.

TOP:

Buy, rent, or lease?

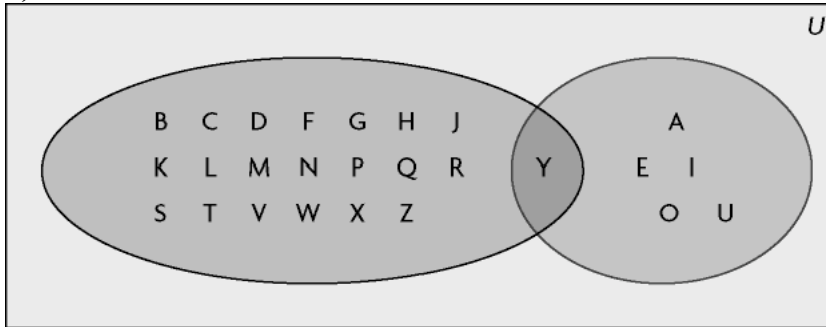
KEY: buy | lease | loans | rent

13. ANS:

a) $C = \{B, C, D, F, G, H, J, K, L, M, N, P, Q, R, S, T, V, W, X, Y, Z\}$

$V = \{A, E, I, O, U, Y\}$

b)



c) No, sets C and V are not disjoint because they share the element Y .

PTS: 5 DIF: Grade 12 REF: Lesson 3.1

OBJ: 2.1 Provide examples of the empty set, disjoint sets, subsets and universal sets in context, and explain the reasoning. | 2.2 Organize information such as collected data and number properties, using graphic organizers, and explain the reasoning. | 2.3 Explain what a specified region in a Venn diagram represents, using connecting words (and, or, not) or set notation. | 2.4 Determine the elements in the complement, the intersection or the union of two sets. | 2.6 Identify and correct errors in a given solution to a problem that involves sets. | 2.7 Solve a contextual problem that involves sets, and record the solution, using set notation.

TOP: Types of Sets and Set Notation KEY: element | set | universal set | disjoint

14. ANS: B PTS: 1 DIF: Grade 12 REF: Lesson 5.2

OBJ: 1.1 Provide examples of statements of probability and odds found in fields such as media, biology, sports, medicine, sociology and psychology. | 1.2 Explain, using examples, the relationship between odds (part-part) and probability (part-whole). | 1.3 Express odds as a probability and vice versa. | 1.4 Determine the probability of, or the odds for and against, an outcome in a situation. | 1.5 Explain, using examples, how decisions may be based on probability or odds and on subjective judgments. | 1.6 Solve a contextual problem that involves odds or probability.

TOP: Probability and Odds KEY: probability | odds

15. ANS: C PTS: 1 DIF: Grade 12 REF: Lesson 5.2

OBJ: 1.1 Provide examples of statements of probability and odds found in fields such as media, biology, sports, medicine, sociology and psychology. | 1.2 Explain, using examples, the relationship between odds (part-part) and probability (part-whole). | 1.3 Express odds as a probability and vice versa. | 1.4 Determine the probability of, or the odds for and against, an outcome in a situation. | 1.5 Explain, using examples, how decisions may be based on probability or odds and on subjective judgments. | 1.6 Solve a contextual problem that involves odds or probability.

TOP: Probability and Odds KEY: probability | odds

16. ANS: B PTS: 1 DIF: Grade 12 REF: Lesson 5.3
 OBJ: 5.9 Solve a contextual problem that involves probability and permutations. | 6.4 Solve a contextual problem that involves combinations and probability.
 TOP: Probabilities Using Counting Methods
 KEY: probability | permutation
17. ANS: C PTS: 1 DIF: Grade 12 REF: Lesson 5.4
 OBJ: 2.1 Classify events as mutually exclusive or non-mutually exclusive, and explain the reasoning. | 2.2 Determine if two events are complementary, and explain the reasoning. | 2.3 Represent, using set notation or graphic organizers, mutually exclusive (including complementary) and non-mutually exclusive events. | 2.4 Solve a contextual problem that involves the probability of mutually exclusive or non-mutually exclusive events. | 2.5 Solve a contextual problem that involves the probability of complementary events. | 2.6 Create and solve a problem that involves mutually exclusive or non-mutually exclusive events.
 TOP: Mutually Exclusive Events KEY: probability | mutually exclusive
18. ANS: A PTS: 1 DIF: Grade 12 REF: Lesson 5.5
 OBJ: 3.2 Determine the probability of an event, given the occurrence of a previous event. | 1.6 Solve a contextual problem that involves odds or probability. TOP: Conditional Probability
 KEY: probability | conditional probability
19. ANS: A PTS: 1 DIF: Grade 12 REF: Lesson 5.6
 OBJ: 3.1 Compare, using examples, dependent and independent events. | 3.3 Determine the probability of two dependent or two independent events. | 3.4 Create and solve a contextual problem that involves determining the probability of dependent or independent events. | 1.6 Solve a contextual problem that involves odds or probability. TOP: Independent Events
 KEY: probability | independent
20. ANS: D PTS: 1 DIF: Grade 12 REF: Lesson 6.3
 OBJ: 1.4 Graph data and determine the polynomial function that best approximates the data. | 1.5 Interpret the graph of a polynomial function that models a situation, and explain the reasoning. | 1.6 Solve, using technology, a contextual problem that involves data that is best represented by graphs of polynomial functions, and explain the reasoning.
 TOP: Modelling data with a line of best fit
 KEY: polynomial functions | line of best fit
21. ANS: B PTS: 1 DIF: Grade 12 REF: Lesson 6.4
 OBJ: 1.4 Graph data and determine the polynomial function that best approximates the data. | 1.5 Interpret the graph of a polynomial function that models a situation, and explain the reasoning. | 1.6 Solve, using technology, a contextual problem that involves data that is best represented by graphs of polynomial functions, and explain the reasoning.
 TOP: Modelling data with a curve of best fit
 KEY: polynomial functions | curve of best fit

22. ANS: A PTS: 1 DIF: Grade 12 REF: Lesson 6.4
 OBJ: 1.4 Graph data and determine the polynomial function that best approximates the data. | 1.5 Interpret the graph of a polynomial function that models a situation, and explain the reasoning. | 1.6 Solve, using technology, a contextual problem that involves data that is best represented by graphs of polynomial functions, and explain the reasoning.
 TOP: Modelling data with a curve of best fit
 KEY: polynomial functions | regression function
23. ANS: A PTS: 1 DIF: Grade 12 REF: Lesson 7.3
 OBJ: 2.4 Graph data and determine the exponential or logarithmic function that best approximates the data. | 2.5 Interpret the graph of an exponential or logarithmic function that models a situation, and explain the reasoning. | 2.6 Solve, using technology, a contextual problem that involves data that is best represented by graphs of exponential or logarithmic functions, and explain the reasoning.
 TOP: Modelling data using exponential functions
 KEY: exponential function | regression function
24. ANS: B PTS: 1 DIF: Grade 12 REF: Lesson 7.4
 OBJ: 2.1 Describe, orally and in written form, the characteristics of exponential or logarithmic functions by analyzing their graph. | 2.2 Describe, orally and in written form, the characteristics of exponential or logarithmic functions by analyzing their equation. | 2.3 Match equations in a given set to their corresponding graphs.
 TOP: Characteristics of logarithmic functions with base 10 and base e
 KEY: logarithmic function
25. ANS: D PTS: 1 DIF: Grade 12 REF: Lesson 7.4
 OBJ: 2.1 Describe, orally and in written form, the characteristics of exponential or logarithmic functions by analyzing their graph. | 2.2 Describe, orally and in written form, the characteristics of exponential or logarithmic functions by analyzing their equation. | 2.3 Match equations in a given set to their corresponding graphs.
 TOP: Characteristics of logarithmic functions with base 10 and base e
 KEY: logarithmic function
26. ANS: A PTS: 1 DIF: Grade 12 REF: Lesson 8.1
 TOP: Understanding angles
 KEY: radian
27. ANS: B PTS: 1 DIF: Grade 12 REF: Lesson 8.1
 TOP: Understanding angles
 KEY: radian
28. ANS: D PTS: 1 DIF: Grade 12 REF: Lesson 8.1
 TOP: Understanding angles
 KEY: radian
29. ANS: B PTS: 1 DIF: Grade 12 REF: Lesson 8.3
 OBJ: 3.1 Describe, orally and in written form, the characteristics of sinusoidal functions by analyzing their graphs. | 3.2 Describe, orally and in written form, the characteristics of sinusoidal functions by analyzing their equations. | 3.3 Match equations in a given set to their corresponding graphs.
 TOP: The graphs of sinusoidal functions
 KEY: sinusoidal function | midline

- 30.** ANS: B PTS: 1 DIF: Grade 12 REF: Lesson 8.3
OBJ: 3.1 Describe, orally and in written form, the characteristics of sinusoidal functions by analyzing their graphs. | 3.2 Describe, orally and in written form, the characteristics of sinusoidal functions by analyzing their equations. | 3.3 Match equations in a given set to their corresponding graphs. TOP: The graphs of sinusoidal functions
KEY: sinusoidal function | period
- 31.** ANS: B PTS: 1 DIF: Grade 12 REF: Lesson 8.4
OBJ: 3.1 Describe, orally and in written form, the characteristics of sinusoidal functions by analyzing their graphs. | 3.2 Describe, orally and in written form, the characteristics of sinusoidal functions by analyzing their equations. | 3.3 Match equations in a given set to their corresponding graphs. TOP: The equations of sinusoidal functions
KEY: sinusoidal function | amplitude
- 32.** ANS: C PTS: 1 DIF: Grade 12 REF: Lesson 8.4
OBJ: 3.1 Describe, orally and in written form, the characteristics of sinusoidal functions by analyzing their graphs. | 3.2 Describe, orally and in written form, the characteristics of sinusoidal functions by analyzing their equations. | 3.3 Match equations in a given set to their corresponding graphs. TOP: The equations of sinusoidal functions
KEY: sinusoidal function | midline