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| **High School** | |
| **Half-Yearly Examination** | |
| **Year 10**  **Advanced Mathematics Course** | |
| **General Instructions**   * Reading time: 5 minutes * Working time: 2 hours * There will be a short break between Section 1 and Section 2 * Write using black or blue pen * You may use a pencil to draw or complete diagrams * Attempt ALL questions * Approved calculators may be used in Section 2. * Write your Name and Teacher’s Name in the spaces provided. * A formula Sheet is on the reverse of this page and can be detached and used in all sections of the test. | **Total Marks – 100**  **Section 1**  Non Calculator Section.  **25 marks**  Time allowed for this section is 30 minutes.  Write all answers in the spaces provided.  **Section 2**  Time allowed for this section is 1 hour and 30 minutes.  **Part A**  Multiple Choice Section.  Mark your answers on the separate answer sheet at the end of the examination.  **50 marks**  **Part B**  Longer Answer Section.  Write all answers in the spaces provided.  **25 marks** |

Formula Sheet

**Pythagoras’ Theorem**



*c* = hypotenuse

*a* and *b* are the shorter sides

**Circumference of a circle**



*d* = diameter

**Area of a circle**



*r* = radius

**Area of a parallelogram**



*b* = base

*h* = perpendicular height

**Area of a rhombus or kite**



*x* and *y* are the diagonals

**Area of a trapezium**



*h* = perpendicular height

*a* and *b* are the parallel sides

**Volume of a prism**



*A* = area of base

*h* = perpendicular height

**Volume of a pyramid**



*A* = area of base

*h* = perpendicular height

**Volume of a cylinder**



*r* = radius

*h* = perpendicular height

**Volume of a cone**



**Volume of a sphere**



**Surface Area of a Cylinder**



**Surface Area of Cone**



*r* = radius

*l* = slant height

**Surface Area of a sphere**



**Trigonometric formulae for a triangle ABC.**

**Sine Rule**



**Cosine Rule**



or



**Area of a triangle**



**Simple interest**



*P* = Principal

*r* = interest rate per time period as a decimal

*n* = number of time periods

**Compound Interest**



*A =* Final amount to which the investment grows

*P* = Principal

*r* = interest rate per compounding period as a decimal

*n* = number of compounding periods

**Depreciation**



*SV =* Salvage Value to which the the initial value falls

*IV* = Initial Value

*r* = depreciation rate per compounding period as a decimal

*n* = number of compounding periods

**Gradient of a line**



 and  are points on the line

*m* = gradient

**Midpoint of a line segment**



**Length of a line segment**



**Equation of a line**



or



*b* = *y* intercept

Half-Yearly Examination

**Advanced Mathematics**

Class/Teacher \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Section 1**

**25 marks**

Time allowed for this section is 30 minutes

Answer Questions 1–25 in the spaces provided.

Calculators are **NOT** to be used in this section.

There will be a short break between Section 1 and Section 2.

|  |  |
| --- | --- |
| **Section 1** Non Calculator Section | |
|  | Write all working and answers in the spaces provided on this test paper. |
| 1. | Amanda walks for  of an hour on Thursday,  hours on Friday and  hours on Saturday. How many hours did she walk altogether in the three days?  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. |
| 2. | Find the value of  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. |
| 3. | Jeremy plays in a football team which last season won 48% of its matches and drew 24%.  The team won 12 matches, how many matches did they lose?  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. |
| 4. | The Riverside Insurance company pays its salespeople a commission of 16% of their sales. Quentin is a salesman who last week sold policies worth $8 000.00.  What was his commission for the week?  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. |
| 5. | Omar and his family make shirts at a cost of $16.00 each and they sell them for $28.00.  What is their profit as a percentage of the cost price?  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. |
| 6. | Iain has 60 DVDs, 16 of which are documentaries and the rest are dramas. What is the ratio of documentaries to dramas?  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. |
| 7. | A steam locomotive on a tourist train uses coal at a rate of 75 kg/h.  How many hours could the locomotive run, if it has 0.6 tonnes of coal left?  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. |
| 8. | *ABC* is a straight line.  Find the value of *x*.  …………………………………………………  …………………………………………………  ………………………………………………… |
| 9. | What is the size of  ………………………………………………  ……………………………………………….  ………………………………………………  ……………………………………………….  ………………………………………………. |
| 10. | *AC* is one diagonal of a kite *ABCD*.  Given the location of *B*, use instruments to accurately complete the kite and draw the other diagonal *BD*. |
| 11. | Marjorie poured equal amounts of soft drink from a 3 litre bottle into 8 equal sized glasses. How many mL does each glass hold?  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. |
| 12. | Tape is to be glued around the perimeter of this kite, to give it extra strength. What length of tape is needed?  ………………………………………………  ………………………………………………  ………………………………………………  ……………………………………………… |
| 13. | Find the area of the trapezium.  .........................................................................  .........................................................................    .........................................................................  ......................................................................... |
| 14. | What is the volume of the triangular prism shown?  .............................................................................    .............................................................................  .............................................................................    ............................................................................. |
| 15. | A  metre ladder leans against a wall with its feet  from the base of the wall.  How far up the wall does the ladder reach?  .............................................................................  .............................................................................    ............................................................................. |
| 16. | Simplify completely:  ..........................................................................................................................................................    .......................................................................................................................................................... |
| 17. | If , what is the value of  ..........................................................................................................................................................    .......................................................................................................................................................... |
| 18. | Expand – 5*a*(3*ab2* – 8*b*).  ..........................................................................................................................................................    .......................................................................................................................................................... |
| 19. | The lines, whose equations are  are shown on the graph.  What are the coordinates of the point P?  ………………………………………………  ………………………………………………  ……………………………………………… |
| 20. | Evaluate  giving your answer as a single integer.  ..........................................................................................................................................................    .......................................................................................................................................................... |
| 21. | Solve the equation below showing full working:    ..........................................................................................................................................................    ..........................................................................................................................................................    ..........................................................................................................................................................    .......................................................................................................................................................... |
| 22. | The sector graph below shows the proportion of votes that five candidates received in an election.  Norah received 1 440 votes.  How many votes did Jess receive?  (A protractor will be useful).  .....................................................................  .....................................................................    .....................................................................  ..................................................................... |
| 23. | The dot plot shows the number of mobile devices that were to be found in a survey of 25 houses.   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  |  | • |  |  |  | • |  | |  |  | • |  |  |  | • |  | |  |  | • |  |  | • | • |  | |  |  | • | • | • | • | • |  | |  | • | • | • | • | • | • |  | |  | • | • | • | • | • | • | • | |  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |  |  | Number of mobile devices | | | | |  |   What percentage of the houses surveyed had fewer than 2 devices?  ..........................................................................................................................................................    .......................................................................................................................................................... |
| 24. | Six students record the number of hours that they study in a week. They were:  16, 22, 8, 24, 15 and 5.  Find the mean number of hours studied.  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. |
| 25. | A cumulative frequency column has been completed for the set of scores below, but the frequency column has been left out.  Find the interquartile range of the scores.     |  |  | | --- | --- | | Score | Cumulative  Frequency | | 2 | 3 | | 3 | 9 | | 4 | 17 | | 5 | 26 | | 6 | 34 |   ……………………………………………………………………………………………….  ……………………………………………………………………………………………….  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. |
|  |  |
|  | End of Section 1 |

Half-Yearly Examination

**Advanced Mathematics**

**Section 2**

**75 marks**

Time allowed for this section is

1 hour and 30 minutes

This section has TWO parts

Part A – Fifty multiple-choice questions worth 1 mark each.

Mark your answers on the separate answer sheet provided at the end of the examination.

Part B – Longer answer questions worth a total of 25 marks.

Write all answers and working in the spaces provided on this examination paper.

Calculators may be used in this section.

Do not commence Section 2 until you are instructed to do so.

|  |  |
| --- | --- |
|  | Use the multiple choice answer sheet at the end of the paper to record your answers.  Complete shade the bubble corresponding to the correct answer for each question. |
|  | There are three deals available on the same T shirts at four different shops.  Which is the best value for money if you wanted to buy three T shirts?  A: Regular price of $12.00.  B: 10% off the regular price of $13.00.  C: A third T shirt free when you buy two at $18.00 each.  D: A third T shirt at half price when you buy two at $14.00 each. |
|  | Which calculation would you use to find the amount that $8 000 grows to when invested at 6% p.a. interest compounding monthly for two years.  A.  B.  C.  D. |
|  | Quentin deposits $12 000 into a term deposit. The account earns interest at the rate of 12% pa compounding quarterly. If he invests the money for a term of 9 months, how much interest will he earn?  A. $1 112.72 B. $3 657.28 C. $4 859.14 D. $21 276.95 |
|  | Otto bought a laptop exactly 3 years ago for $1 200.00. It depreciates at 15% pa compounded annually. What is its value now?  A. $40.50 B. $452.58 C. $506.25 D. $736.95 |
|  | Alanna mixes concrete which consists of sand, aggregate and cement in the ratio 5 : 3 : 1.  If she has 9 buckets of aggregate how many buckets of sand and cement will she need?  A. 10 buckets of sand and 3 buckets of cement.  B. 10 buckets of sand and 6 buckets of cement.  C. 15 buckets of sand and 3 buckets of cement.  D. 15 buckets of sand and 6 buckets of cement. |
|  | Find the value of *c*.  A.  B.  C.  D. |
|  | Which is true?    A. *m* = 24o  B. *m* = 80o  C. *m* = 100o  D. *m* = 128o |
|  | *A’B’C’D’* is the image of *ABCD* after a rotation.  Which statement is not necessarily true?  A. The matching sides are parallel.  B. The matching sides are equal.  C. The matching angles are equal.  D. The areas are the same. |
|  | What is the value of *b*?  A. 53o  B. 75o  C. 127o  D. 158o |
|  | *KLMN* is a parallelogram.    What is the size of  A. 52o  B. 56o  C. 72o  D. 128o |
|  | A cylindrical water tank has the dimensions shown. What is the volume of the tank to the nearest cubic metre?  A. 10 m3  B. 20 m3  C. 40 m3  D. 80 m3 |
|  | A mini greenhouse is in the shape of a triangular prism.  It has plastic film on all faces except the floor.  What area of plastic film is needed for the greenhouse?  A. 2.55 m2 B. 4.5 m2  C. 5.1 m2 D. 6.6 m2 |
|  | What is the surface area of this cylinder?  A.  B.  C.  D. |
|  | Find the value of, correct to the nearest degree.  A. 35o    B. 44o  C. 46o  D. 55o |
|  | From the top deck of a lighthouse which is built on a vertical cliff, the angle of depression of a yacht is 35o.  The deck of the lighthouse is 240 m above the level of the ocean.  How far is the yacht from the base of the cliff?  A. 138 m B. 168 m    C. 196 m D. 343 m |
|  | when fully factorised is:  A.  B.  C.  D. |
|  | The gradient of the line shown is :  A.  B.  C.  D. 3 |
|  | Find the length of the interval joining *M*(-5, 7) and *N*(-1, 0).  A. units B. units C. units D. 11 units |
|  | A.  B.  C.  D. |
|  | Which line in the solution of the equation  , contains an error?    A. Line 1 B. Line 2 C. Line 3 D. Line 4 |
|  | The line graph shows the temperature of a patient during a period when she was admitted to hospital.      For how many hours was her temperature at or above 39o C?  A. One hour B. One and a half hours.  C. Two and a quarter hours D. Two and a half hours |
|  | Which term best describes the distribution of goals scored in the graph shown?  A. Outliers  B. Skewed  C. Statistical  D. Symmetrical |
|  | Questions 48 and 49 refer to the stem and leaf plot which shows the number of points scored by the twenty teams in a trivia quiz.     |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | 0 | 9 |  |  |  |  |  | | 1 | 4 | 9 |  |  |  |  | | 2 | 3 | 4 | 6 | 8 | 9 |  | | 3 | 1 | 2 | 4 | 5 | 8 | 9 | | 4 | 1 | 3 | 3 | 4 |  |  | | 5 | 3 | 5 |  |  |  |  | |
|  | Which two measures have the same value?  A. The mean and mode. B. The mean and median.  C. The median and mode. D. No two are the same. |
|  | What is the interquartile range of the scores?  A. 8 B. 15 C. 16 D. 17 |
|  | The back to back histogram shows the distribution of the number of books read by thirty students at two schools in the MS readathon.  Which statement is true?  A. The Bridgetown data is symmetrical.  B. The Bridgetown data has a greater median.  C. The Smithfield data has a greater range.  D. The Smithfield data has two modal values. |
|  | Sandeep invests $12 000 into an account which pays 9% pa compounded annually. How long will it take for his investment to be worth more than $30 000?  A. 6 years B. 7 years C. 9 years D. 11 years |
|  | Louisa bought a new car for $30 000 five years ago. The car depreciated so that the value of the car today is $17 714.70. What was the annual percentage rate of depreciation?  A. 5% pa B. 7% pa C. 8% pa D. 10% pa |
|  | A.  B.  C.  D. |
|  | A. 8 B.  C.  D. |
|  | A.  B.  C.  D. |
|  | is right angled at Q.  PR is produced to T  *QS = SR = RT*.    What is the value of *x*?  A. 42 B. 45 C. 48 D. 60 |
|  | *ABCDEF* is a regular polygon.  *CE* is drawn at right angles to *CB* and produced to *G*.  *AF* is produced to *G*.  *DE* is produced to meet *FG* at *H*.  What is the size of  A. 20o B. 30o C. 45o D. 60o |
|  | A globe of the earth is to be made from solid plastic. The radius of the globe is to be 12 cm. What volume of plastic will be used for the globe ( to the nearest 100 cm3)?  A. 600 cm3  B. 1 800 cm3  C. 7 200 cm3  D. 21 700 cm3 |
|  | What is the surface area of the square pyramid shown?  A. 3 600 cm2  B. 6 000 cm2  C. 9 600 cm2  D. 60 000 cm2 |
|  | Lucie cuts a sheet of paper and rolls it to form a conical shape to use as a filter for a funnel as shown.  What area of paper is used, assuming there is no overlapping of paper?  A. 201 cm2  B. 251 cm2  C. 402 cm2  D. 820 cm2 |
|  | Expand and simplify  A.  B.  C.  D. |
|  | Factorise  A.  B.    C.  D. |
|  | Simplify by first factorising the numerator and denominator.  A.  B.  C.  D. |
|  | The solution to a pair of simultaneous equations is shown:    In which line does a mistake occur?  A. Line 1 B. Line 2 C. Line 3 D. Line 4 |
|  | Use the graph below to solve  .  A. (-2, 10) B. (0, 4) C. (2, 6) D. (8, 0) |
|  | The solutions to  are:  A.  B.  C.  D. |
|  | The solutions to  are:  A.  B.  C.  D. |
|  | The distance/time graph shows a truck’s progress as it ascends a hill.  The truck stopped at a service station part way up the hill.  Which section of the graph most likely represents the steepest section of the hill? |
|  | The graph shows the water level in a tank which is filled and drained through the same valve in its base.  Between what times is the water passing through the valve at the greatest rate?  A. Between noon and 2 pm.  B. Between 4 pm and 5 pm.  C. Between 6 pm and 7 pm.  D. Between 8 pm and 9 pm. |
|  | The graph of  is shown.  The graph of  would pass through the point:  A. (-1, 0) B. (0, -1)  C. (0, 1) D. (1, 0) |
|  | The Venn diagram compares the voting preferences and the occupations of a survey group of 120 voters.  A person is chosen at random from the survey group. What is the probability that they worked for the Public Service and voted for the Government?  A.  B.  C.  D. |
|  | This table shows how people of different ages performed on a test of various Information Technology skills.   |  |  |  |  | | --- | --- | --- | --- | |  | Aged twenty or more | Aged less than twenty | Total | | Passed IT test | 45 | 35 | 80 | | Failed IT test | 17 | 23 | 40 | | Total | 62 | 58 | 120 |   A person who did the test was chosen at random, what is the probability that they were aged less than twenty and failed the test?  A.  B.  C.  D. |
|  | **Questions 73 – 74 refer to the following.**  The ages of those attending the Brown and Green family reunions are shown on the back to back stem and leaf plot.   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Brown | | | | | | | Stem | Green | | | | | | | |  |  |  |  |  |  | 6 | 0 | 5 | 6 |  |  |  |  |  | |  |  |  |  |  |  | 4 | 1 | 3 | 5 | 6 | 8 |  |  |  | |  |  |  |  | 6 | 6 | 2 | 2 | 0 | 2 | 5 | 5 | 8 | 9 |  | | 9 | 8 | 8 | 8 | 7 | 7 | 5 | 3 | 1 | 3 | 5 | 5 |  |  |  | |  | 9 | 8 | 6 | 4 | 3 | 0 | 4 | 2 | 6 |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
|  | Which is true?  A. The Brown data is more skewed toward the older ages and hence has a higher median.  B. The Green data is more skewed toward the older ages and hence has a higher median.  C. The Brown data is more symmetrical and hence has a higher median.  D. The Green data is more symmetrical and hence has a higher median. |
|  | The Brown data has a mean of 34.8 and a standard deviation of 11.4.  Which statement is true?  A. The two sets of data have similar means but the Greens have a much higher standard deviation.  B. The two sets of data have similar means but the Browns have a much higher standard deviation.  C. The two sets of data have similar standard deviations but the Greens have a much higher mean.  D. The two sets of data have similar standard deviations but the Browns have a much higher mean. |
|  | Kevin collects information on the number of weeks that construction projects take to complete.  The box plot below is drawn from the data.  Which statement is true?   1. 25% of projects took between 20 and 26 weeks.   B. 75% of projects took between 24 and 36 weeks.  C. 25% of projects took between 24 and 36 weeks.  D. 75% of projects took between 24 and 32 weeks. |
| End of Section 2 - Part A | |

|  |  |  |
| --- | --- | --- |
| Section 2  Part B  Longer Answer Section | | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Class/Teacher\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | Write all working and answers in the spaces provided on this examination paper.  Calculators are allowed for this section. | |

|  | | **Marks** |
| --- | --- | --- |
|  | 1. Expand and simplify   ……………………………………………………………………………………………….  ……………………………………………………………………………………………….  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | **1** |
|  | 1. Rationalise the denominator of   ……………………………………………………………………………………………….  ……………………………………………………………………………………………….  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | **2** |

|  |  |  |
| --- | --- | --- |
|  | A trophy for a film festival is in the shape of a cone topped by a sphere as shown.  The height of the cone is 18 cm and the diameter of its base is 15 cm.  Both the cone and sphere are made of solid plastic.  The sphere has a volume one quarter of that of the cone. |  |
|  | 1. What volume of plastic (to the nearest cm3) is needed to make the cone?   ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | **1** |
|  | 1. What is the diameter of the sphere to the nearest mm?   ……………………………………………………………………………………………….  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | **2** |
|  | David (D), Evan (E) and Frank (F) are experimenting with walkie talkies in a flat paddock..  Evan walks 750 m due east from David and then due south until his signal has dropped out. At this point he is on a bearing of 130o from David.  Frank is due south of David, and on an east-west line which runs 100m south of Evan. |  |
|  | 1. How far is Evan from David in a straight line?   ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….…………………….. | **1** |
|  | 1. What is the bearing of Frank from Evan?   ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….…………………….. | **2** |
|  | The table gives the value after a given number of years of an article initially valued at $1000 under a variety of depreciation rates.   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  | Depreciation rate pa | | | | | | | | Years | 4.5% | 5.0% | 5.5% | 6.0% | 6.5% | 7.0% | 7.5% | | Owned | | 1 | $955.00 | $950.00 | $945.00 | $940.00 | $935.00 | $930.00 | $925.00 | | 2 | $912.03 | $907.25 | $902.48 | $897.70 | $892.93 | $888.15 | $883.38 | | 3 | $870.98 | $866.42 | $861.86 | $857.30 | $852.74 | $848.18 | $843.62 | | 4 | $831.79 | $827.43 | $823.08 | $818.72 | $814.37 | $810.02 | $805.66 | | 5 | $794.36 | $790.20 | $786.04 | $781.88 | $777.72 | $773.56 | $769.41 | | 6 | $758.61 | $754.64 | $750.67 | $746.70 | $742.73 | $738.75 | $734.78 | | 7 | $724.48 | $720.68 | $716.89 | $713.10 | $709.30 | $705.51 | $701.72 | | 8 | $691.87 | $688.25 | $684.63 | $681.01 | $677.38 | $673.76 | $670.14 | | 9 | $660.74 | $657.28 | $653.82 | $650.36 | $646.90 | $643.44 | $639.98 | |  |
|  | 1. What is the value of a car worth $20 000 when new, after it depreciates at 5.5% pa for 7 years?   ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….…………………….. | **1** |
|  | 1. How many years would it take an amplifier which had a new price of $2 500, to drop to $1 866.75 under 6% pa depreciation.   ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….…………………….. | **2** |
|  | 1. Factorise   ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….…………………….. | **1** |
|  | 1. Simplify the fraction:  by first factorising.   ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….…………………….. | **2** |
|  | (a) Solve .  ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….…………………….. | **2** |
|  | (b) Find the exact solutions to  ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….…………………….. | **2** |
|  | 1. Draw a neat sketch of  on the set of axes below. | **2** |
|  | 1. Show that  has the same axis of symmetry as the curve drawn in part (a).   ……………………………………………………………………………………………….……………………..  ……………………………………………………………………………………………….…………………….. | **1** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | (a) Complete the frequency distribution table below.     |  |  |  |  | | --- | --- | --- | --- | | Class | Class Centre (*x*) | Frequency (*f*) | *fx* | | 1 – 3 | 2 | 2 |  | | 4 – 6 | 5 | 5 |  | | 7 – 9 | 8 | 8 |  | | 10 – 12 | 11 | 4 |  | | 13 – 15 | 14 | 5 |  | | 16 – 18 | 17 | 6 |  | | **1** |
|  | (b) Calculate the mean of the scores. (Answer correct to the nearest tenth.)  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | **1** |
|  | (c) Describe how you could use a graph to estimate the median of this data.  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | **1** |
|  | End of Examination |  |

High School

Half-Yearly Exam

Advanced Mathematics Course

Multiple Choice Section Answer Sheet

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Teacher \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Completely fill the response oval representing the most correct answer.

26. A B C D

27. A B C D

28. A B C D

29. A B C D

30. A B C D

31. A B C D

32. A B C D

33. A B C D

34. A B C D

35. A B C D

36. A B C D

37. A B C D

38. A B C D

39. A B C D

40. A B C D

41. A B C D

42. A B C D

43. A B C D

44. A B C D

45. A B C D

46. A B C D

47. A B C D

48. A B C D

49. A B C D

50. A B C D

51. A B C D

52. A B C D

53. A B C D

54. A B C D

55. A B C D

56. A B C D

57. A B C D

58. A B C D

59. A B C D

60. A B C D

61. A B C D

62. A B C D

63. A B C D

64. A B C D

65. A B C D

66. A B C D

67. A B C D

68. A B C D

69. A B C D

70. A B C D

71. A B C D

72. A B C D

73. A B C D

74. A B C D

75. A B C D