MINISTRY OF EDUCATION, HERITAGE & ARTS

FIJI YEAR 8 EXAMINATION 2022

MATHEMATICS

Time Allowed: 1½ hours
(An extra 10 minutes is allowed for reading this paper)

INSTRUCTIONS

1. Write your **Index Number** in the space provided in the **Answer Booklet**.

2. **All** answers are to be **written in the Answer Booklet** with either blue or black ink. **Do not use red ink.**

3. **Do not** spend too much time on any one question. **Do not** start writing until you are told to do so.

4. Write neatly and clearly.

5. If you use extra sheets of paper, be sure to show clearly the question number(s) being answered and to tie each sheet in your **Answer Booklet** at the appropriate places. Ensure that your **Index Number** is written on the extra sheets.

6. There are **two** sections in this paper. **Both Sections A and B are compulsory**.

SUMMARY OF QUESTIONS

SECTION	QUESTION TYPE	MARK	SUGGESTED TIME
A	There are **twenty** multiple choice questions. **All are compulsory**.	40	36 minutes
B	There are **fourteen** short-answer questions. **All are compulsory**.	60	54 minutes
	TOTAL	**100**	**90 minutes**

INSTRUCTIONS

The following shows how to answer **multiple-choice** questions in the **Answer Booklet**.

(a) In your **Answer Booklet**, circle the letter of the **best** answer. **If you change your mind**, put a line through your first circle and draw a circle round the letter of your next choice.

For example:

12	A	B	C	D

(b) **If you change your mind** again and like your first answer better, put a line through your second circle and tick (✓) your first answer.

For example:

12	A	B ✓	C	D

(c) **No mark** will be given if you circle more than one letter as the answer for a question.

SECTION A [40 marks]

MULTIPLE-CHOICE QUESTIONS

There are **twenty** questions in this section. Each question is worth **2 marks**. Answer **all** questions.

Circle the letter of the **best** answer in the **Answer Booklet**.

1. The value of 6 in the number 567 892 is

   A. sixty

   B. six hundred

   C. six thousand

   D. sixty thousand

2. Identify a prime number in the set {51, 53, 55, 57}

   A. 51 B. 53

   C. 55 D. 57

3. Arrange the set of numbers given in descending order.

67 483	64 782	64 832	67 873

A. {67 483 64 832 64 782 67 873}

B. {67 483 67 873 64 832 64 782}

C. {67 873 67 483 64 832 64 782}

D. {64 782 64 832 67 483 67 873}

4. -18 + -3 = ☐

A. -21 B. 21

C. 15 D. -15

5. The set of numbers {1, 3, 6, 10, 15} belong to

A. prime numbers.

B. square numbers.

C. triangular numbers.

D. rectangular numbers.

6. $8\frac{2}{3} - 2\frac{1}{2} =$

A. $6\frac{1}{6}$ B. $6\frac{5}{6}$

C. $6\frac{3}{4}$ D. $6\frac{1}{2}$

7. 9.872 written to one decimal place would be

A. 9.2 B. 9.7

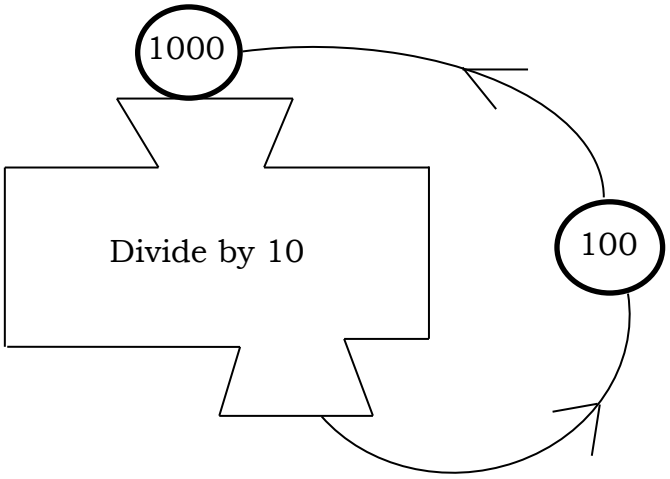
C. 9.8 D. 9.9

8. Which two numbers do not belong to the sequence given below?

Sequence: { 1, 2, 4, 9, 12, 16, 25 }

A. { 1,4 }
B. { 2,4 }
C. { 2,12 }
D. { 9,12 }

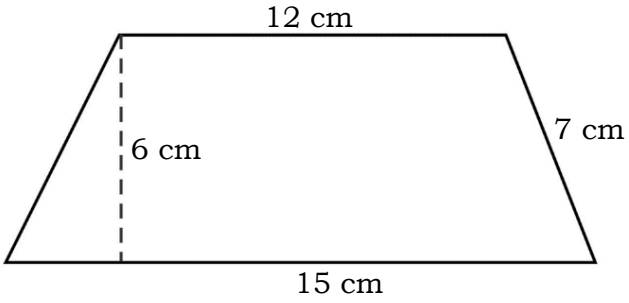
9. Study the number machine below.



The third number in the sequence produced by the number machine would be

A. 100
B. 10
C. 1
D. 0.1

10. The diagram of a trapezium is given below.



The correct way of calculating the area of the trapezium is

A. ½ (12 + 15) x 6
B. ½ (12 + 15) x 7
C. ½ (6 + 7) x 15
D. ½ (6 + 7) x 12

11. How many 250ml cups will fill up a 2 litre jug?

A. 2 B. 4

C. 6 D. 8

12. Which of the following weights is correctly converted?

A. 10.2 kg = 10.2 grams B. 10.2 kg = 102 grams

C. 10.2 kg = 1 020 grams D. 10.2 kg = 10 200 grams

13. Sydney is 2 hours behind Fiji. If the Sydney Sevens Final match begins at 7pm, at what time should we be able to watch the game in Fiji?

A. 5 pm B. 7 pm

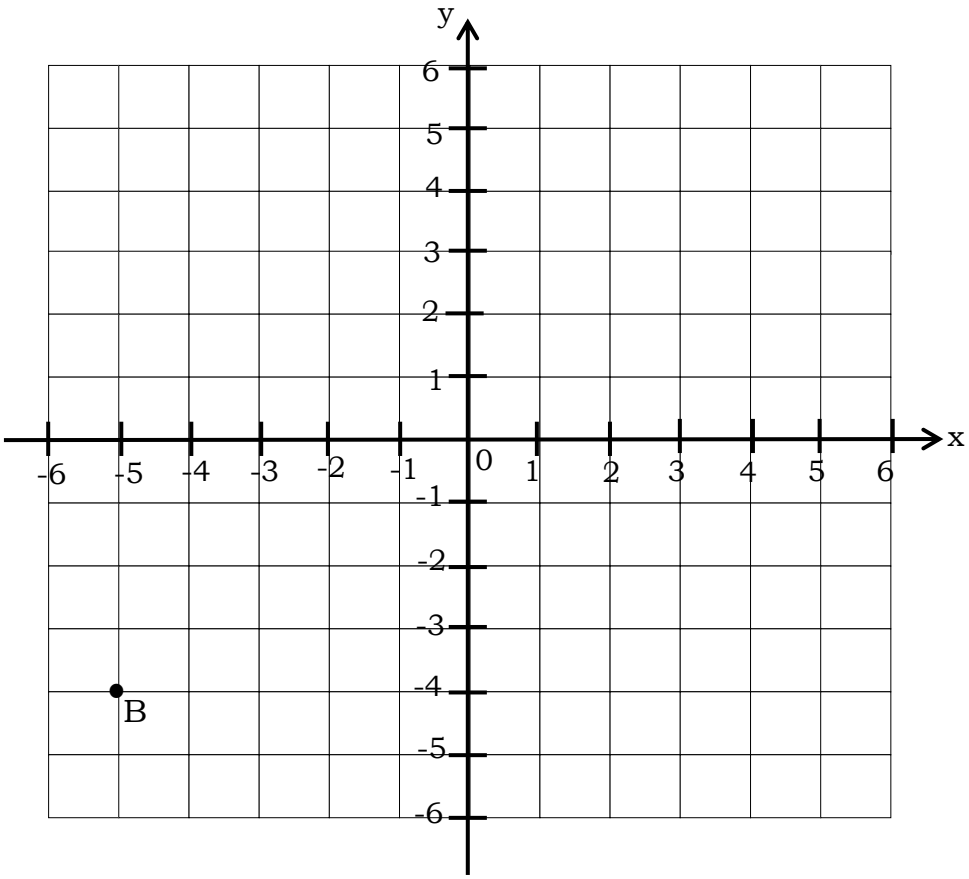
C. 9 pm D. 11 pm

14. A 10% discount is given when you buy an electric kettle on cash. What would be the sale price if the marked price is $89.00?

A. $89.10 B. $80.10

C. $97.90 D. $8.90

15. Study the coordinate plane below to answer the question.



The coordinates for Point B are

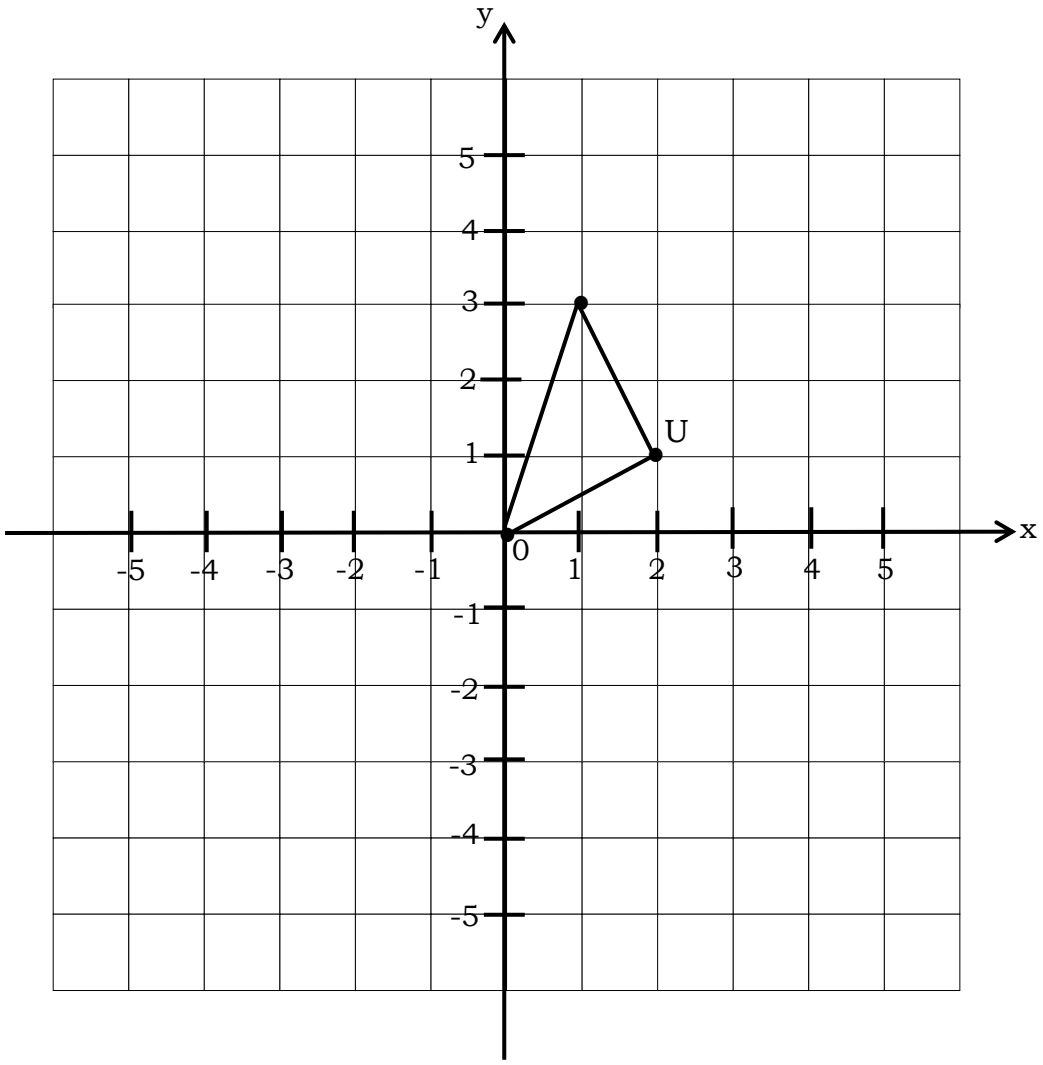
A. (-5, -4)

B. (-4, -5)

C. (5, -4)

D. (-5, 4)

16. The diagram of a triangle is shown on the grid below.



The coordinates of Point U when translated 4 units down and 3 units to the right will be

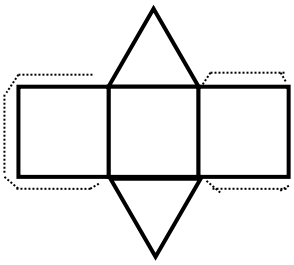
A. (-5 , -3)

B. (-3 , 2)

C. (2 , -3)

D. (5 , -3)

17. The netting of a 3D shape is given below.



Which shape is formed using the above net?

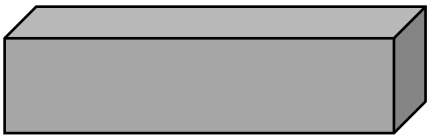
A. Cube

B. Square prism

C. Triangular prism

D. Rectangular prism

18. How many edges does a rectangular prism have?



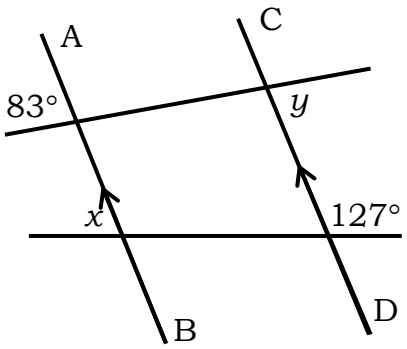
A. 4

B. 6

C. 7

D. 12

19. In the figure below, AB is parallel to CD.



What is the value of ***x*** ?

A. 53° B. 83°

C. 127° D. 210°

20. Use the table below to answer the question.

Subject	English	Maths	Science	Urdu
Test Score	94	83	88	75

The average of the scores is

A. 83 B. 88

C. 85 D. 94

SECTION B [60 marks]

There are fourteen questions in this section. **Answer all the questions**. Write the answer to each question in the space provided in the **Answer Booklet**. **Show all necessary working as partial mark may be awarded if your answer is incorrect**.

QUESTION 1

Each question is worth **1 mark**. Answer **all** the questions.

(a) Write seven hundred seventy six thousand and three in numeral.

_____

(b) -5 – -3 = ☐

(c) What property of multiplication is shown: 3 x (4 x 5) = (3 x 4) x 5

(d) 19.8 + 0.017 = ☐

(e) If 4p = 36 then p = ☐

(f) The perimeter of a square is 32cm. What is its area?

(g) Volume of a Cone = _____ x the volume of a cylinder.

(h) The number of minutes from 11.30am to 1.45pm on the same day is

_____

(i) A tetrahedron has _____ vertices.

(j) A straight angle is equal to _____ degrees.

QUESTIONS 2 – 6

Each question is worth **3 marks**. Answer **all** the questions.

2. (a) List all the factors of 18. **(1 mark)**

   (b) The Highest Common Factor of 8 and 24 is _____ **(2 marks)**

3. In a school of 280 students, only $\frac{2}{5}$ attended school on Friday.

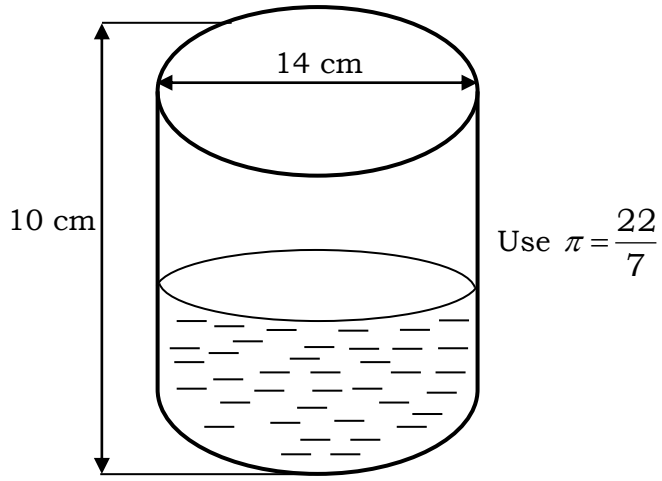
   (a) What fraction of students were absent on Friday? **(1 mark)**

   (b) How many students attended school on Friday? **(2 marks)**

4. Find the values of **r**, **s** and **t** in the sequence below.

(3 marks)

5. Study the diagram of the cylinder given below.

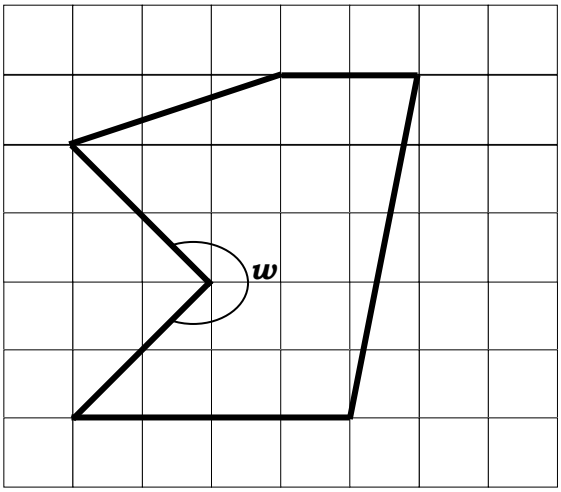


Use $\pi = \frac{22}{7}$

Calculate the volume of water in the cylinder if it is half filled. **(3 marks)**

SECTION B (continued)

6. A polygon is drawn on a grid given below.



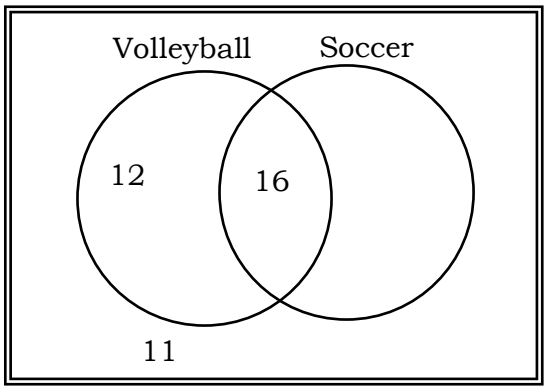
(a) What name is given to the polygon shown? **(1 mark)**

(b) Calculate the size of angle w. **(2 marks)**

QUESTIONS 7 – 11

Each question is worth **4 marks**. Answer **all** the questions.

7. The Venn diagram below shows the 46 students in Year 801 with their favourite sports.



(a) How many students like volleyball? **(1 mark)**

(b) How many students neither like volleyball nor soccer? **(1 mark)**

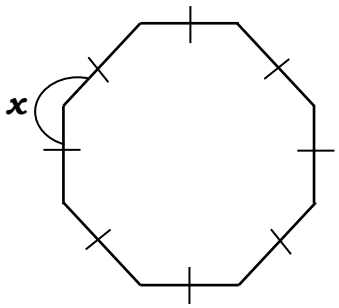
(c) Calculate the number of students who like only soccer. **(2 marks)**

8. A bus left Nadi at 7.30am and it took 180 minutes to reach Suva. It covered a distance of 240km.

   (a) When will the bus arrive in Suva? **(2 marks)**

   (b) Calculate the average speed of the bus in km per hour. **(2 marks)**

9. Study the diagram of the regular polygon given below to answer the questions.



   (a) Name the polygon. **(1 mark)**

   (b) Calculate the angle marked ***x***. **(2 marks)**

   (c) What type of angle is ***x*** ? **(1 mark)**

10. Sharon borrowed $4 500 from the bank. The bank charged her an interest of 9% per annum.

   (a) Calculate her interest for 2 years. **(2 marks)**

   (b) How much would she pay back to the bank after 2 years? **(2 marks)**

SECTION B (continued)

11. The frequency table below shows the scores for Year 8A in their Mid Term Examination.

Percentage Marks Scored	Tally	Frequency
0	|	*1*
10	||	*2*
20	|||	*3*
30	||||	4
40	𝍸 ||||	***m***
50	𝍸 ||	*7*
60	|||	*3*
70	𝍸 𝍸	*10*
80	|	*1*
90	||	*2*

(a) What is the value of ***m***? **(1 mark)**

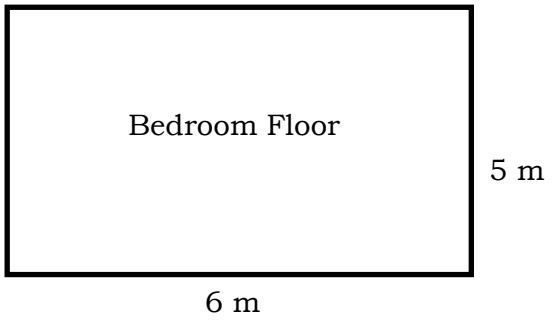
(b) How many students scored marks between 50 and 90 percent? **(2 marks)**

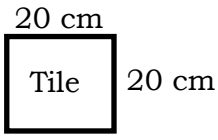
(c) Which mark was scored by most students? **(1 mark)**

Questions 12 – 14

Each question is worth **5 marks**. Answer **all** the questions.

12. A carpenter wants to tile the floor of his bedroom.



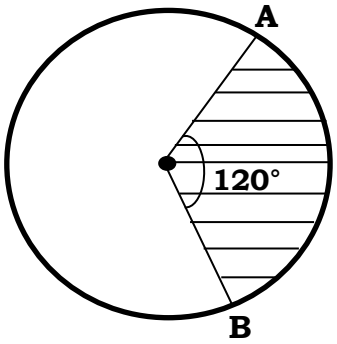


(a) Calculate the area of one tile in square metres. **(2 marks)**

(b) How many tiles are needed to tile the bedroom floor? **(2 marks)**

(c) What is the total cost of tiles needed if one tile costs $0.80? **(1 mark)**

13. The circle drawn below has a diameter of 28cm.



Use $\pi = \frac{22}{7}$

(a) Find the radius of the circle. **(1 mark)**

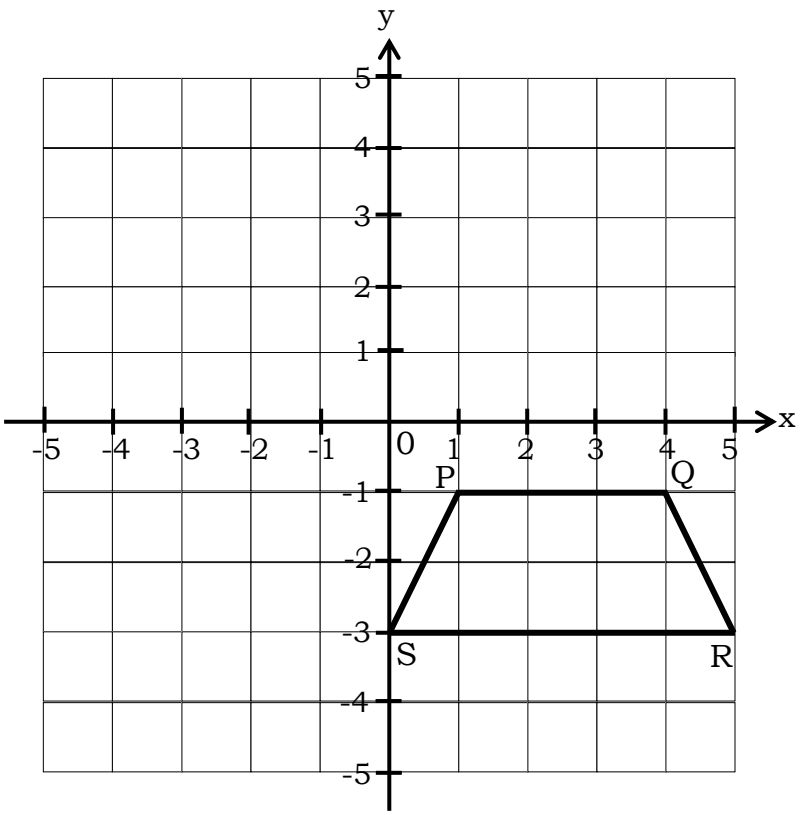
(b) Calculate the:

(i) circumference of the circle. **(2 marks)**

(ii) area of the shaded region. **(2 marks)**

SECTION B (continued)

14. Use the diagram to answer the questions.



(a) In your **Answer Booklet**, draw and label the image of PQRS when reflected on the y-axis. **(3 marks)**

(b) Draw a line of symmetry on PQRS. **(2 marks)**

THE END