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11 Plus

Paper [8]

Maths Non-Calculator

Total marks: [40]

Time allowed: 60 minutes

Instructions

You have 1 hour.

There are 40 marks available. Try to answer all the questions. Remember to show your working out.

No calculators are allowed.

Full name _____

Questions

1. Write the following times in the 24 hour clock:

a. 9.45pm   b. 2.02pm   c. 8.23pm

2. What percentage of three hours is 18 minutes? (2 marks)

3. Which of these regular polygons has the largest interior angle?

a. pentagon   b. square   c. octagon

4. Put these numbers in descending order of size

0.82   8.2   0.082   82

5. Write the number 69, 303 in words.

6. Ed wants to make 2 litres of blackcurrant squash. He knows he needs four times as much water as squash concentrate. He has four hundred millilitres of squash concentrate. Does he have enough to make 2 litres? (2 marks)

7. A bag contains two red balls, four green balls and six yellow balls. Adrian picks a ball at random. What is the likelihood of him picking a ball that is

a. red

b. green or yellow

c. blue?

Express your answers as fractions in their simplest form. (2 marks each)

8. Look at the following list of numbers:

3   9   15   24   64

Which of these numbers is a

a. cube number

b. prime number

c. square number

9. Erisha sells 1500 tickets to her concert. Four tenths of those people who attend are women. How many men attend? (2 marks)

10. Look at these winning scores from a recent tennis tournament:

Game 1	Game 2	Game 3	Game 4	Game 5	Game 6
11	12	15	15	14	

The results for Game 6 are missing. Josie says "the mean winning score was 12". What is the missing score? (3 marks)

11. What is the mode of these numbers?

12   8   34   8   9   10

12. Monique has a cube. One of the sides measures 5cm. What is the volume of the cube?

13. When Priya and her family arrive at the airport, they discover their suitcase is too heavy to take on the plane. The weight limit is 23kg. They take out an item which weighs 650g and their suitcase is accepted. What is the maximum weight of the original suitcase? Give your answer in kilograms. (2 marks)

14. In Shona's café, because they use different cups, cups of coffee weigh 1.5 times as much as cups of tea. If three cups of tea weigh 900g, how much do five cups of coffee weigh? Give your answer in kilograms. (2 marks)

15. Ron's coaches have *x* seats. Daisy's coaches have *y* seats. Formulate an algebraic expression in terms of *x* and *y* if Dan wants to hire three of Ron's coaches and ten of Daisy's for his school trip. (2 marks)

16. What is the highest factor of both 8 and 20?

17. In a scalene triangle, one of the angles is 75° and one is 34°. What is the size of the other angle?

18. Which of these objects will hold around 300mls of liquid?

a. a swimming pool   b. a cup of tea   c. a teaspoon   d. a large bucket

19. Write these numbers to two decimal places

a. 4.356   b. 0.0999   c. 6.129

20. In an English test, Sharina scores 60%. Ayshia gets 44 questions out of 80 correct. Who scores more?

21. Mike's map has a scale of 1: 30,000cm. He measures the distance on the map between two places and finds it is 8cm. How far is this in kilometres? (2 marks)

22. The Government enacted a law in 1891 and it stayed in force for 114 years before being repealed. In which year was it repealed?

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Answers

1. a. 21.45   b.14.02   c.20.23

2. 10%

3. c. octagon

4. 82, 8.2, 0.82, 0.082

5. Sixty-nine thousand, three hundred and three

6. Yes – he has exactly the right amount.

7. a. 1/6   b. 5/6   c. 0

8. a. 64   b. 3   c. 9

9. 600 men

10. 5

11. 8

12. 125cm^3

13. 23.65kg

14. 2.25kg

15. 3x + 10y

16. 4

17. 71°

18. a cup of tea

19. a. 4.36   b. 0.10   c.6.13

20. Sharina

21. 2.4km

22. 2005