Cambridge Assessment International Education

MOUNT CARMEL INTERNATIONAL SCHOOL, AKOLA

CAMBRIDGE PRIMARY IGCSE (TERM END Examinations-I)

Grade: 7 **Subject: Mathematics** **Date: 11.11.2024**

Candidate Name: _____ Roll Number: _____

Max Marks: 80 **Time Duration: 120 minutes** **Invigilator's Sign:**

SCRUTINY											
Q1		Q11		Q21		Q31		Q41		Q51	
Q2		Q12		Q22		Q32		Q42		Q52	
Q3		Q13		Q23		Q33		Q43		Q53	
Q4		Q14		Q24		Q34		Q44		Q54	
Q5		Q15		Q25		Q35		Q45		Q55	
Q6		Q16		Q26		Q36		Q46		Q56	
Q7		Q17		Q27		Q37		Q47		Q57	
Q8		Q18		Q28		Q38		Q48		Q58	
Q9		Q19		Q29		Q39		Q49		Q59	
Q10		Q20		Q30		Q40		Q50		Q60	

Marks Obtained			
80	20	100	Grade

Sub. Tr. Sign: _____

Q.1. Maxine is going to compare some flower in her local park. She is going to be comparing: (3)

- The number of petals.
- The height of the flower
- The colour of the petals
- The name of the flower
- The diameter of the stem.

Categorise these types of data under the headings: categorial data, discrete data, continuous data.

Categorial Data	Discrete Data	Continuous Data

Q.2. Use the number from 0 to 9 exactly once in the empty boxes to make each of the following statements true. (2)

a. 6 ___ 2 is divisible by 4.

b. 43 ___ is divisible by 5 and _____.

Q.3. A website manager wants to find out about the age and gender of people who use the site and how often they use it. Design a short questionnaire for users to complete to collect this data. (3)

Q.4. A school has 1000 students. The head teacher wants to investigate the average time that students at her school spend travelling to school. (3)

a. Write down the population for the head teacher's investigation.

_____

b. She decides to ask a sample of ten students in Year 7 for their journey time to school.

_____

_____

c. Explain how the head teacher could choose the students who will be in her sample.

_____

_____

Q.5. In a magic square, all the rows, columns and diagonals add to the same total. Complete these magic squares. **(2)**

	-5	
-4	7	0

Q.6. a. Write a square number that is greater than 70 and less than 90. **(1)**

_____

b. Write a cube number that is greater than 100 and less than 200. _____. **(1)**

Q.7. Benji says that -12 + 35 has a negative answer, because a negative and a positive make a negative. Explain why Benji is incorrect. **(2)**

_____

_____

_____

Q.8. Write the value of: **(2)**

a. $\sqrt{7^2}$ = _____ b. $\sqrt{30}$ X $\sqrt{30}$ = _____

Q.9. There are mistakes in the statements below.

i. $8 \times 10^3 = 0.8 \times 10^2$ ii. $2300 \div 10^3 = 2.3 \times 10$ iii. $10^1 \times 10^0 = 1$

a. Describe the mistakes and correct them. **(3)**

Q.10. Round the number 9.8257: **(2)**

a. to one decimal place and 2 s.f. = _____ _____

b. to three decimal places and 1 s.f. = _____ _____

Q.11. Estimate and then calculate 7.123 ÷ 3. Round the answer to three decimal places. **(3)**

Estimate:

Calculate:

Rounding:

Q.12. Which of these calculations is the odd one out? Explain your answer. **(2)**

a. 2.3×10^2 b. $23000 \div 10$ c. 0.23×10^3 d. 23×10

_____

_____

_____

Q.13. Work out the following. **(1)**

a. $1\frac{4}{5} + \frac{3}{5} =$

Q.14. a. Estimate 78.44 ÷ 37 **(1)**

b. Show the calculation 78.44 ÷ 37. **(1)**

Q.15. Jenni multiplies a decimal number by a single digit number. Her answer is 0.32. What could Jenni's calculation be? **(1)**

_____

_____

_____

Q.16. Use the digit 1, 2, 3, 4, 5 and 6 once each to make this calculation correct: **(2)**

$\square\frac{\square}{\square} + \square\frac{\square}{\square} = 4\frac{7}{12}$

Q.17. Ben writes $\frac{1}{4} \times \frac{2}{3} = \frac{3}{8}$. Explain how you know that this answer cannot be correct. Calculate the correct answer. **(2)**

_____

_____

_____

_____

Q.18. Add one pair of brackets to make each calculation correct. **(2)**

a. 3 + 5 x 5 – 2 = 18

b. $6 - 2^2 \div 8 = 2$

Q.19. Work out: **(2)**

a. $\frac{8}{9} \times 270 =$

b. $\frac{5}{8} \div \frac{5}{12} =$

Q.20. Paloma uses this method to work out $\left(\frac{4}{5}\right)^2 \times 300$.

Solution

$$\left(\frac{4}{5}\right)^2 = \frac{4}{5} \times \frac{4}{5} = \frac{16}{25} \text{ and } \frac{16}{25} = \frac{16 \times 4}{25 \times 4} = \frac{64}{100}$$

$$\text{So, } \left(\frac{4}{5}\right)^2 \times 300 = \frac{64}{100} \times 300$$

$$300 \div 100 = 3 \text{ and } 3 \times 64 = 192.$$

a. Use Paloma's method or your own method to work out: **(3)**

1. $\left(\frac{2}{5}\right)^2 \times 400 =$

Q.21. A baby elephant has a mass of 105 kg. The elephant increases in mass by 95 kg per year. Work out how many years it will take for the elephant's mass to increase to 2 tonnes. Give your answer to the nearest year. **(2)**

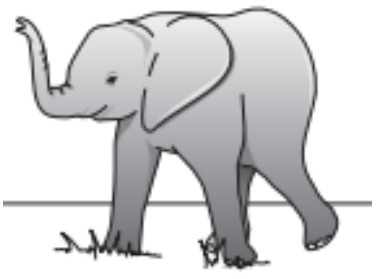
_____

_____

_____

_____

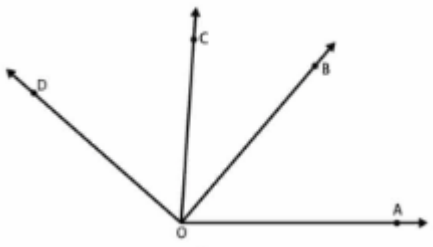
_____



Q.22. Write down each pair of adjacent angles from the figure. **(2)**

_____

_____



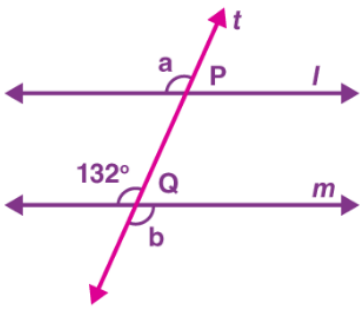
Q.23. Work out $6\frac{1}{4} \div 1\frac{2}{3}$ **(2)**

Give your answer as a mixed number in its simplest form.

Q.24. Draw a ring around the fraction that is the largest. **(1)**

$\frac{7}{10}$	$\frac{19}{30}$	$\frac{11}{15}$	$\frac{2}{3}$

Q.25. In a figure, line l is parallel to line m and t intersect lines at P and Q, respectively. Find the sum 2a + b. **(2)**



Q.26. Find the value of angle x, y and z. **(3)**

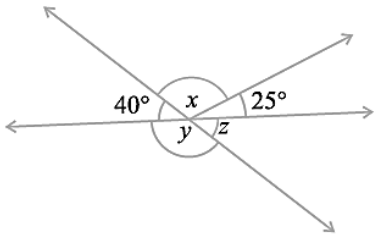
_____

_____

_____

_____

_____

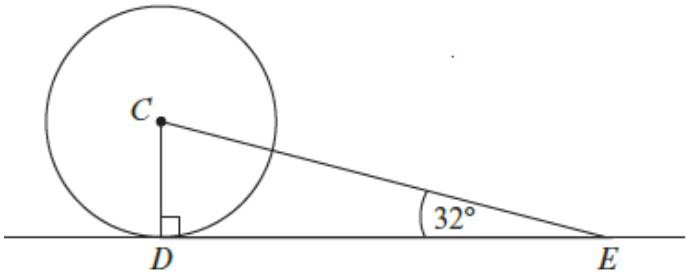


Q.27. Identify which of the following angles are complementary and which are supplementary. **(2)**

a. 65^0, 115^0 - _____

b. 63^0, 27^0 - _____

Q.28. The diagram shows a circle with centre C. A tangent touches the circle at D. A line from C meets the tangent at E. CDE is a triangle. Angle CED = 32^0.



a. Copy and complete this sentence: **(1)**

The line CD is a _____ of the circle.

b. Write down the size of angle CDE. _____ **(1)**

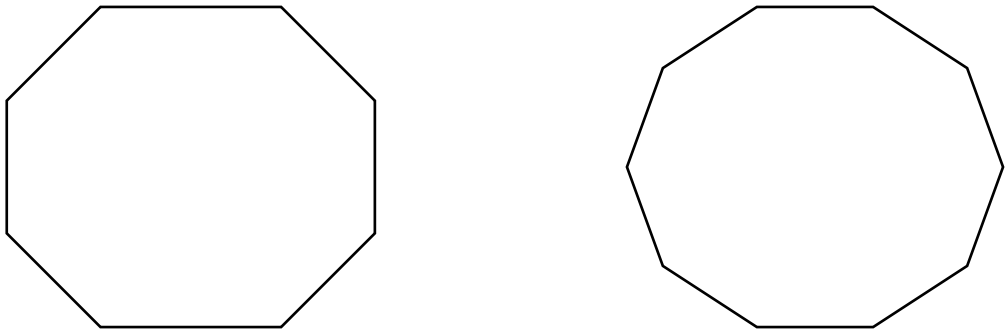
c. Work out the size of angle DCE. **(1)**

Q.29. Solve the following. **(2)**

a. $8^{\square} \times \square^{2} = \square^{5}$

b. $2^{4} + 2^{\square} = \square^{12}$

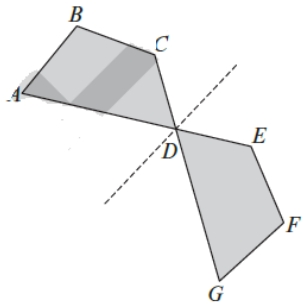
Q.30. The diagram shows a regular octagon and a regular decagon. The perimeter of shapes is the same. Work out the side length of the decagon. **(2)**



←15 mm→

Q.31. In the diagram, the dotted line represents a line of symmetry. **(2)**

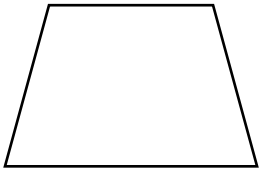
ADE and CDG are straight lines.
∠ABC = 115°, DGF = 70° and BCD = 120°.
Work out the value of ∠CDE.



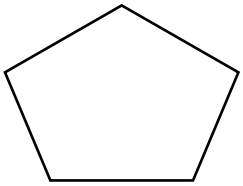
Q.32. Draw the top view, front view and side view of a cylinder. (3)

Q.33. Copy each of these shapes. Show how you can split each shape into the number of congruent shapes stated. (3)

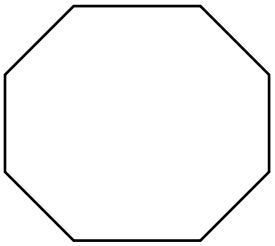
a. Two pairs of congruent triangles.



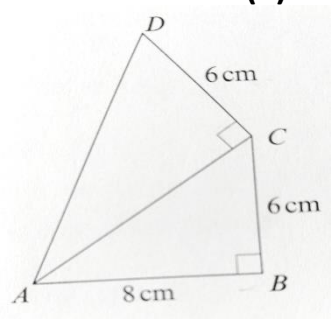
b. Five congruent triangles.



c. One pair of congruent triangles and two congruent trapezia.



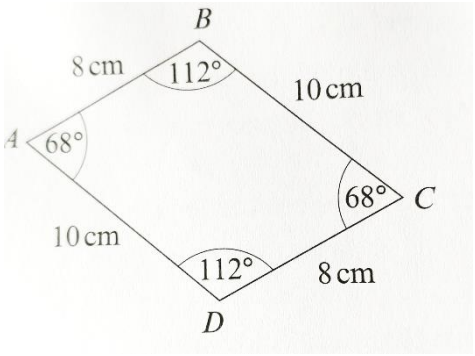
Q.34.a. Draw the quadrilateral ABCD. (2)



b. Measure the length of AD. _____ **(1)**

c. Measure the angles of the quadrilateral. _____ **(1)**

Q.35.a. Draw this parallelogram. **(2)**



b. Measure the diagonal BD. **(1)**