

Year 8 Term 1 Test

Student Name: _____	Grade: _____
Date: _____	Score: _____

- Answer the questions in the spaces provided on the question sheets.
- If you run out of room for an answer, continue on the back of the page.
- This test has 20 questions, for a total of 100 marks.
- Attempt all 20 questions.
- Time allowed: 45 minutes.

Page:	1	2	3	4	5	Total
Points:	20	21	24	15	20	100
Score:						

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11 Year 8 Term 1 Test

Question 1 2 marks

Express 0.35% as a fraction. _____

Question 2 2 marks

Express $1\frac{2}{5}$ as a percentage. _____

Question 3 2 marks

Convert 510.5% to a mixed numeral. _____

Question 4 2 marks

Convert $2\frac{12}{25}$ to a percentage. _____

Question 5 2 marks

Convert 108% to a decimal. _____

Question 6 2 marks

Convert 0.305 to a percentage. _____

Question 7 2 marks

What percentage of 16 g is 24 g? _____

Question 8 2 marks

What percentage is 900 g of 2.5 kg? _____

Question 9 2 marks

Increase \$85 by 15%. _____

Question 10 2 marks

Decrease \$320 by $12\frac{1}{2}$ %. _____

Question 11

Simplify these expressions:

(a) $-2pq + 5 + 14pq - 9pq - 13 - 5p$ _____ [2]

(b) $2x^2 - y - 8x^2 + 5y + 6xy - 3$ _____ [2]

(c) $(-12ab) \times (-5bc) \times (-4ac^2)$ _____ [2]

(d) $= \frac{60pq^2}{5p^2q}$ _____ [2]

(e) $20m^8n \div 5m^3 \div 2m^2n^2$ _____ [2]

(f) $3(4x + 5) + 2(x - 5) - 4(x - 3)$ _____ [2]

(g) $2x^2y^2 - 6xy^2 + 8x^2y^2$ _____ [2]

(h) $(4m^6n^5)^4$ _____ [2]

Question 12

Factorise the following expressions by taking out the highest common factor (HCF):

(a) $2x^2y - 6xy^4 + 8x^2y^2$ [2]

(b) $3xy^3z^4 + 6x^3y^4z - 9x^6y^5z^4$ [3]

Question 13

Simplify the following algebraic fractions:

(a) $\frac{5y-2}{4} + \frac{2y-5}{7}$ [4]

(b) $\frac{x+7}{5} - \frac{x-5}{7}$ [4]

(c) $\frac{15e}{4f} \times \frac{12g}{5h}$ [4]

(d) $\frac{35w}{12x} \div \frac{7w^2}{4y}$ [4]

Question 14

State whether the following data is categorical (C), discrete quantitative (DQ) or continues quantitative (CQ).

(a) Academy-award winning movies _____ [2]

(b) Number of telephone numbers in the Yellow Pages _____ [2]

(c) Reaction times of drivers _____ [2]

(d) Number of planets in the solar system _____ [2]

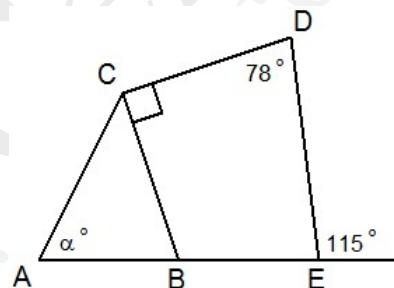
Question 15.....5 marks

The size of a television screen is given by the length of its diagonals. Find the size of a television screen of length 55 cm and width 48 cm.

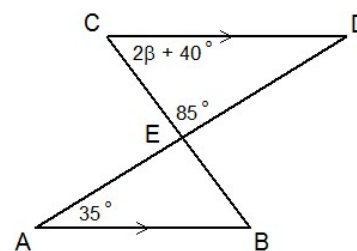
Question 16.....

For the diagrams shown below:

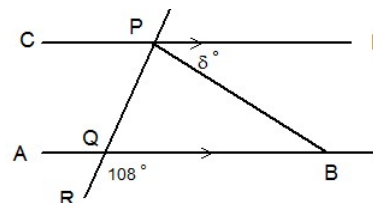
(a) If $AC = BC$, find the value of $\alpha =$ _____ [3]



(b) If $AB \parallel CD$, find the value of $\beta =$ _____ [3]



(c) If $PB = QB$, find the value of $\delta =$ _____ [4]



Question 17.....5 marks

A rectangle's length is two times as long as its breadth. If it is $(x-3)$ cm long, find its perimeter and area in term of x .

Question 18.....5 marks

In a math test, 16% of the students failed. 8 of the failures were boys. The remaining $\frac{3}{5}$ of the failures were girls. 30 girls passed the test. Find the percentage of students that were boys who had passed the test.

Question 19.....5 marks

Mike and Ken have a total of 580 marbles. 75% of Mike's marbles is equal to 12% of Ken's marbles. How many marbles does Ken have?

Question 20.....5 marks

A total of 108 men and women participated in a marathon race. After $\frac{2}{9}$ of the men and 33 women dropped out of the race, the ratio of the remaining men to women became 2:1. What was the ratio of men to women at the beginning of the race?
