

TRENDING-GHANA EXAMINATIONS CONSULTS

(INTELLIGENCE IS OUR HALLMARK)

SUBJECT: Mathematics

SECTION B

Q1a. List the members of each set

B = {Whole number from 20 to 30} and

D = {factors of 63}

List the members of (i) $B \cap D$ (ii) $B \cup D$

b. Solve $5 - 2x > x + 2$, and illustrate your result on the number line.

c. Solve the equation $\frac{2x-1}{3} - \frac{x-2}{4} = 1$

Q2a. A driver spends money on petrol in a given weeks as follows.

Monday GH¢ 150.25

Tuesday GH¢ 100.50

Wednesday GH¢ 120.30

Thursday GH¢ 85.55

Friday GH¢ 140.00

Find how much was spend on petrol for the whole week.

b. Subtract 6.972 from the sum of 7.25 and 0.72.

c. Evaluate (i) 2.91×1.2 (ii) $0.48 \div 0.2$

Q3. The following marks were obtained by pupil in a test.

6	4	8	2	8
6	8	8	8	10
8	9	8	6	10
2	2	6	6	6

a. Construct a frequency distribution table for the data.

b. What is the mode mark?

c. Calculate the mean mark.

d. How many pupils scored more than six marks?

Q4. Make a stem-and-leaf plot for the numerical values in the table below

26	19	21	13	28	20	17	26	23	28
22	17	32	41	35	12	30	25	22	32
34	36	24	27	33	13	18	21	26	39

Find how many numbers are in the;

a) 10s

b) 20s

c) 30s

d) 40

Section A

1. Expand $(2a + b)(a + 2b)$
a) $2a^2 + 2b^2$ b) $2a^2 + 2b^2 + ab$ c) $5a^2 + 2a^2b^2$ d) $2a^2 + 5ab + 2b^2$
2. Arrange the fraction $\frac{3}{4}, \frac{2}{3}, \frac{3}{5}$ in ascending order
a) $\frac{2}{3}, \frac{3}{4}, \frac{3}{5}$ b) $\frac{3}{4}, \frac{2}{3}, \frac{3}{5}$ c) $\frac{3}{5}, \frac{2}{3}, \frac{3}{4}$ d) $\frac{3}{5}, \frac{3}{4}, \frac{2}{3}$
3. If $P = \{7, 9, 13\}$ and $Q = \{1, 7, 13\}$. Find, $P \cap Q$
a) $\{1, 7, 13\}$ b) $\{1, 9, 13\}$ c) $\{7, 13\}$ d) $\{7, 9, 13\}$
4. If $a = 2^2 \times 2^3 \div 2^4$. Find the value of a
a) 2^9 b) 2^5 c) 2^3 d) 2
5. If 26039 oranges are shared equally among 13 women, how many oranges does each woman receive?
a) 23 b) 203 c) 230 d) 2003
6. Simplify $\frac{1}{2}(1\frac{1}{2} + \frac{3}{4} \div \frac{1}{4})$
a) $1\frac{1}{2}$ b) $2\frac{1}{4}$ c) $2\frac{3}{4}$ d) $4\frac{1}{2}$
7. Remove the brackets: $a - 2(b - 3c)$
a) $a - 2b - 3c$ b) $a - 2b - 6c$ c) $a - 2b + 6c$ d) $a - 3b + 3c$
8. The area of a square is 49cm^2 . Find the perimeter of the square
a) 7cm b) 51cm c) 28cm d) 49cm
9. Express $\frac{3}{8}$ as a percentage
a) 0.375% b) $12\frac{1}{2}\%$ c) 25% d) $37\frac{1}{2}\%$

Use the mapping below to answer the question **10** and **11**

$$2^0 \longrightarrow a$$

$$2^{-1} \longrightarrow b$$

10. What is the value of a?
a) 0 b) $\frac{1}{2}$ c) 1 d) 16
11. What is the value of b?
a) -2 b) $\frac{1}{2}$ c) $\frac{1}{4}$ d) 1
12. Simplify $\frac{1}{3} - \frac{1}{2} + \frac{2}{5}$
a) $\frac{17}{30}$ b) $\frac{12}{30}$ c) $\frac{7}{30}$ d) $\frac{-7}{30}$
13. Write *two hundred thousand and fifty-seven* in figures
a) 20057 b) 200057 c) 2000057 d) 20000057
14. Simplify $\frac{6^2}{2^2 \times 3}$
a) 1 b) 2 c) 3 d) 6
15. Simplify $7(y + 1) - 2(2y + 3)$
a) $3y - 5$ b) $3y - 2$ c) $3y + 1$ d) $3y + 4$
16. Simplify $2ab^2 \times 3a^2b$
a) $5a^2b^2$ b) $6a^2b^2$ c) $5a^2b^2$ d) $6a^3b^3$
17. Simplify $4p + 6p^2 - 2p + 2p^2$
a) $2p + 8p^2$ b) $6p + 8p^2$ c) $2p - 8p^2$ d) $6p + 8p^2$
18. If $Q = \{\text{multiples of 4 less than 16}\}$, find Q
a) $\{4, 8, 10\}$ b) $\{4, 8, 12\}$ c) $\{1, 4, 8, 12\}$ d) $\{4, 8, 12, 16\}$
19. Find the next two numbers in the sequence 2, 5, 9, 14, 20, ____, ____

- a) 26,24 b) 26, 35 c) 27, 34 d) 27, 35
20. Kofi bought four pencils at Gh¢200 each and five pencils at Gh¢350 each. How much did he pay altogether?
a) Gh¢2,400 b) Gh¢2,450 c) Gh¢2,550 d) Gh¢2,650
21. A mapping is defined by $x \longrightarrow x^2 - 1$. What is the image of 3 under the mapping?
a) 8 b) 5 c) 6 d) 7
22. Express $\frac{1}{25}$ as a decimal fraction
a) 0.4 b) 0.04 c) 0.004 d) 0.0004
23. Arrange the following fractions in descending order of magnitude $\frac{1}{2}, \frac{17}{20}, \frac{3}{4}$
a) $\frac{3}{4}, \frac{17}{20}, \frac{1}{2}$ b) $\frac{17}{20}, \frac{3}{4}, \frac{1}{2}$ c) $\frac{1}{2}, \frac{3}{4}, \frac{17}{20}$ d) $\frac{1}{2}, \frac{17}{20}, \frac{3}{4}$
24. A rectangle has a length of 8cm and a breadth of 6cm. What is the area of the rectangle?
a) 10cm² b) 48cm² c) 14cm² d) 2cm²
25. Write 78910 correct to the nearest thousand
a) 70,000 b) 78,000 c) 79,000 d) 80,000
26. Which of the following numbers is the next prime number greater than 23?
a) 17 b) 24 c) 25 d) 29
27. Find the least common multiple (LCM) of 4, 6 and 10
a) 10 b) 24 c) 30 d) 60
28. Expand 3(2a + 3b)
a) 2a + 9b b) 5a + 6b c) 6a + 3b d) 6a + 9b
29. Three basket contains 95 oranges, x oranges and 2x oranges. How many oranges are in the three baskets?
a) 96x b) 95x + 3x c) 95 + 2x² d) 98x
30. Given that $\frac{1}{2p} = \frac{1}{8}$, find the value of p
a) 4 b) 3 c) 2 d) 1
31. Simplify 3q x 12pq
a) 15p²q b) 36pq² c) 15pq² d) 36p²q
32. $\frac{20}{48}$ Written in its lowest term will be
a) $\frac{2}{45}$ b) $\frac{20}{12}$ c) $\frac{20}{32}$ d) $\frac{5}{12}$
33. Which of the following sets is equivalent to {x, y, z}
a) {} b) {0} c) {1, 2} d) {1, 2, 3}
34. Simplify (46 x 102) + (102 x 54)
a) 1,020 b) 10, 200 c) 102,000 d) 1,020,000
35. The perimeter of a rectangle is 24cm. If the length is 7cm, find its width
a) 3cm b) 5cm c) 10cm d) 12cm
36. Expand -x(3 - 2x)
a) -2x² - 3x b) 2x² - 3x c) -2x² + 3x d) 2x² + 3x
37. Find the area of a square, if its perimeter is 28cm.
a) 784cm² b) 196cm² c) 49cm² d) 14cm²
38. Simplify 3a² x 2ab x 4bc
a) 9a³b²c b) 12a²b²c c) 24a²b²c d) 24a³b²c
39. Evaluate $\frac{37}{100} \times \frac{7}{10}$
a) 0.259 b) 2.590 c) 25.900 d) 259.000
40. Simplify $1\frac{1}{2} + 2\frac{1}{4} - 3\frac{5}{8}$
a) $\frac{1}{8}$ b) $\frac{3}{8}$ c) $\frac{3}{16}$ d) $\frac{5}{16}$