

Sample JAMB Past Questions and Answers on Mathematics

- If M represents the median and D the mode of the measurements 5, 9, 3, 5, 8 then (M,D) is
 A. (6,5) B. (5,8) C. (5,7)
 D. (5,5) E. (7,5)
- A construction company is owned by two partners X and Y and it is agreed that their profit will be divided in the ratio 4:5. At the end of the year, Y received ₦5,000 more than X. What is the total profit of the company for the year?
 A. ₦20,000.00 B. ₦25,000.00 C. ₦30,000.00
 D. ₦15,000.00 E. ₦45,000.00
- Given a regular hexagon, calculate each interior angle of the hexagon.
 A. 60° B. 30° C. 120°
 D. 45° E. 135°
- Solve the following equations
 $4x - 3 = 3x + y = 2y + 5x - 12$
 A. $4x=5, y=2$ B. $x=2, y=5$ C. $x=-2, y=-5$
 D. $x=5, y=-2$ E. $x=-5, y=-2$
- If $x = 1$ is a root of the equation $x^3 - 2x^2 - 5x + 6$, find the other roots
 A. -3 and 2 B. -2 and 2 C. 3 and -2
 D. 1 and 3 E. -3 and 1
- If x is jointly proportional to the cube of y and the fourth power of z . In what ratio is x increased or decreased when y is halved and z is doubled?
 A. 4:1 increase B. 2:1 increase C. 1:4 decrease
 D. 1:1 no change E. 3:4 decrease
- In the above figure $\angle PQR = 60^\circ$, $\angle QPR = 90^\circ$, $\angle PRS = 90^\circ$, $\angle RPS = 45^\circ$, $QR = 8\text{cm}$. Determine PS
 A. $2\sqrt{3}\text{cm}$ B. $4\sqrt{6}\text{cm}$ C. $2\sqrt{6}\text{cm}$
 D. $8\sqrt{6}\text{cm}$ E. 8cm
- Given that $\cos z = L$, where z is an acute angle find an expression for $\cot z - \operatorname{cosec} z$
 $\sec z + \tan z$
 A. $1 - L$ B. $L^2 - 1 - L^2$ C. $-L - 1 - L$
 $1 + L$ D. $L^2 + L - 1$ (C) $1 + L$ E. $1 - L^2$
 D. $1 - L$ E. $L - (L^2 - 1)$
 $(L^2 + L^2) + 1 - L^2$ 1 + $1 - L^2$ + $1 - L^2$
- If $0.0000152 \times 0.00042 = Ax^{108}$, where $1 \leq A < 10$, find A and B .
 A. $A = 9, B = 6^{\cdot}38$ B. $A = 6.38, B = -9$ C. $A = 6.38, B = 9$
 D. $A = 6.38, B = -1$ E. $A = 6.38, B = 1$
- If $x + 2$ and $x - 1$ are factors of the expressions $lx^2 + 2kx + 24$, find the values of l and k
 A. $l = -6, k = -9$ B. $l = -2, k = 1$ C. $l = -2, k = -1$
 D. $l = 0, k = 1$ E. $l = 6, k = 0$
- Make T the subject of the equation
 $av = 3\sqrt{2V + T}$
 $1 - \sqrt{a} \sqrt{2T}$
 A. $3\sqrt{v(1-v)}$ B. $2\sqrt{(1-v)^2 - a^2v^2/2a^2v^2 - (1-v)^2}$
 C. $2\sqrt{(1-v)^2 + a^3v^2/2a^2v^2 + (1-v)^2}$
 D. $2\sqrt{(1-v)^2 - a^4v^3/2a^3v^3 - (1-v)^3}$
 E. $2\sqrt{(1-v)^3 - a^4v^3/2a^3v^3 + (1-v)^3}$
- In a class of 60 pupils, the statistical distribution of the number of pupils offering Biology, History, French,

Geography and Additional Mathematics is as shown in the pie chart above. How many pupils offer Additional Mathematics?

A. 15

B. 10

C. 18

D. 12

E. 28

13 The value of $(0.303)^3 - (0.02)^3$ is

A. 0.019 B. 0.0019 C. 0.00019

D. 0.000019 E. 0.000035

14. y varies partly as the square of x and y partly as the inverse of the square root of x . write down the expression for y if $y = 2$ when $x = 1$ and $y = 6$ when $x = 4$

A. $y = 10x^2 + 52$ B. $y = x^2 + 1$

C. $y = x^2 + 1$

D. $y = x^2 + 1$ E. $y = 10(x^2 + 1)$

F. $y = 10x^2 + 52$

15. Simplify $(x - 7) / (x^2 - 9) (x^2 - 3x) / (x^2 - 49)$

A. $x / (x-3)(x+7)$ B. $(x+3)(x+7) / x$ C. $x / (x-3)(x - 7)$

D. $x / (x+3)(x+7)$ E. $x / (x+4)(x+7)$

16. The lengths of the sides of a right-angled triangle are $(3x + 1)$ cm, $(3x - 1)$ cm and x cm.

A. 2 B. 6 C. 18

D. 12 E. 0

17. The scores of a set of a final year students in the first semester examination in a paper are

41, 29, 55, 21, 47, 70, 70, 40, 43, 56, 73, 23, 50, 50. find the median of the scores.

A. 47 B. $48\frac{1}{2}$ C. 50

D. 48 E. 49