

No questions imported because the language of the labels in the Word file does not match your current Moodle interface language. "" != "en": No questions imported because the language of the labels in the Word file does not match your current Moodle interface language. "" != "en"

No questions imported because the language of the labels in the Word file does not match your current Moodle interface language. "" != "en": No questions imported because the language of the labels in the Word file does not match your current Moodle interface language. "" != "en"

Fill in the Blank (FBQs):

FBQ1: Convert 2710 to another number in base three\_\_\_\_\_

Answer: \*1000 base 3\*

FBQ2: Find the length of a chord which subtends an angle of 90o at the centre of a circle whose radius is 8cm, \_\_\_\_\_

Answer: 82cm

FBQ3: If  $\log 4 = 0.6021$ , evaluate  $\log 41/3$

Answer: \*0.2007\*

FBQ4: A square tile has side 30cm. how many of these tiles will cover a rectangular floor of length 7.2m and width 4.2m?

Answer: \*336\*

FBQ5: Solve without using tables  $\log_5(62.5) \hat{=}$   $\log_5(1/2)$ , \_\_\_\_\_

Answer: \*3\*

FBQ6: If N225.00 yields N27.00 in x-year simple interest at 4% per annum, find x

Answer: \*3\*

FBQ7: If  $x^2+9 = x+1$ , solve for x \_\_\_\_\_

Answer: \*4\*

FBQ8: In slope-intercept form, the equation of a line passing through the point (-3,2) and parallel to  $4x-y=7$  is given as \_\_\_\_\_.

Answer: \* $y=4x+4$  \*

FBQ9: A regular polygon has 150o as the size of each interior angle. How many sides has the polygon?,

Answer: \*12\*

FBQ10: \_\_\_\_\_ is the principal which amounts to N5,500 at simple interest in 5years at 2% per annum

Answer: \*N5,000\*

FBQ11: The x intercept of  $9x-2y=18$  is \_\_\_\_\_

Answer: \*(3,0)\*

FBQ12: A cylindrical tank has a capacity of  $3080\text{m}^3$ . What is the depth of the tank, if the base diameter of the base is  $14\text{m}$ \_\_\_\_\_

Answer:  $*20\text{m}^*$

FBQ13: Simplify  $12-312+3$  \_\_\_\_\_

Answer:  $*1/3^*$

FBQ14: If  $\sin \hat{J} = 3/5$ , find  $\tan \hat{J}$ ,\_\_\_\_\_

Answer:  $*3/4^*$

FBQ15: Calculate the logarithm to base 9 of  $3-4 \sqrt[3]{92} - (81)^{-1}$ , \_\_\_\_\_

Answer:  $*-2^*$

FBQ16: In triangle XYZ,  $\hat{X} = 150^\circ$ ,  $\hat{Z} = 45^\circ$  and  $XY = 7\text{cm}$ , find  $\sin X$

Answer:  $726\text{cm}$

FBQ17: Find  $r$ , if  $6r78 \div 5119$  \_\_\_\_\_

Answer:  $*3^*$

FBQ18: Express the product of  $0.21$  and  $0.34$  \_\_\_\_\_

Answer:  $*7.14 \times 10^{-2}^*$

FBQ19: Given that  $\log 2 = 0.3010$  and  $\log 7 = 0.8451$ . evaluate  $\log 112$ ,

Answer:  $*2.0491^*$

FBQ20: If the two smaller sides of a right angle triangle are  $4\text{cm}$  and  $5\text{cm}$ , find its area

Answer:  $*10 \text{ sq cm}^*$

FBQ21: Find the value of  $x$  for which  $2(32x-1)=162$ ,

Answer:  $*5/2^*$

FBQ22: Simplify  $\log_2 8 \log_4 8$ ,

Answer:  $*3/2^*$

FBQ23: When a dealer sells a bicycle for N81 he makes a profit of  $8\%$ . What did he pay for the bicycle?,

Answer:  $*N75^*$

FBQ24: Write the decimal number  $39$  to base  $2$ ,

Answer:  $*100111^*$

FBQ25: Two distinct sectors in the same circle subtend  $1000$  and  $300$  respectively at the centre of the circle. Their corresponding arcs are in the ratio\_\_\_\_\_

Answer:  $*10:3^*$

FBQ26: A side of a rhombus is  $2\text{cm}$  in length. An angle of the rhombus is  $60^\circ$ . What is the length of the diagonal facing the angle\_\_\_\_\_

Answer:  $*2\text{cm}^*$

FBQ27: Given a regular hexagon, calculate each interior angle of the hexagon \_\_\_\_\_  
Answer:  $120^\circ$

FBQ28: The Common difference of sequence 5,8,11,14,â€¦ is\_\_\_\_  
Answer:  $3$

FBQ29: One interior angle of a convex hexagon is  $170^\circ$  and each of the remaining angles is equal to  $x^\circ$ . Find  $x$ , \_\_\_\_\_  
Answer:  $110^\circ$

FBQ30: A regular polygon of  $n$ -sides has  $160^\circ$  as the size of each of interior angle.  
Find  $n$ , \_\_\_\_\_  
Answer:  $18$

FBQ31: The perimeter of a rectangular lawn is 24cm. if the area is 35 sq cm, how wide is the lawn?  
Answer:  $5\text{cm}$

FBQ32: Find the radius of a sphere whose surface area is  $154\text{ cm}^2$ , [ $\pi=22/7$ ],  
Answer:  $3.5\text{cm}$

FBQ33: The angle between latitudes  $30^\circ\text{S}$  and  $13^\circ\text{N}$  is, \_\_\_\_\_  
Answer:  $43^\circ$

FBQ34: If  $\sin x = \cos x$ , find  $x$  between  $0^\circ$  to  $360^\circ$ ,  
Answer:  $45^\circ$

FBQ35: The area of a circle is \_\_\_\_\_  $\text{cm}^2$  whose circumference is 44cm,  
Answer:  $154\pi$

FBQ36: A sector of a circle of radius 14cm has an area of  $77\text{cm}^2$ . Calculate the angle of the sector at the centre,  
Answer:  $45^\circ$

FBQ37: What is the length of a chord drawn 12cm away from the centre of a circle of radius 13cm,  
Answer:  $10\text{cm}$

FBQ38: Find an exterior angle of a regular pentagon,  
Answer:  $72^\circ$

FBQ39: Find the hypotenuse of a right-angled triangle of which its shorter sides are  $3\text{cm}$  and  $4\text{cm}$  respectively,  
Answer:  $5\text{cm}$

FBQ40: Calculate the area of an equilateral triangle of side 12cm  
Answer:  $36\sqrt{3}\text{cm}^2$

FBQ41: What is the length of a diagonal of a square whose area is  $242\text{cm}^2$ \_\_\_

Answer:  $22\text{cm}$ \*

FBQ42: If  $\cos \hat{L} = \frac{3}{5}$ , find  $\tan \hat{L}$ ,

Answer:  $\frac{3}{4}$ \*

FBQ43: What is the volume of a cone whose radius is 9cm and height is 21cm,  
\_\_\_\_\_  $\text{cm}^3$

Answer:  $2442$ \*

FBQ44: If  $m=3$ ,  $q=2$  and  $r=21$  evaluate  $m^2qr$

Answer:  $\frac{243}{7}$ \*

FBQ45: Simplify  $3^{12} \div 3^{12}$ , \_\_\_\_\_

Answer:  $\frac{7}{3}$ \*

FBQ46: What is the diagonal of a land measuring 100m by 100m?

Answer:  $100\sqrt{2}\text{m}$

FBQ47: The slope of the linear equation  $y=12x-2$  is \_\_\_\_\_.

Answer:  $\frac{2}{3}$ \*

FBQ48: If three people are to share N72 in the ratio of 3:4:5, what is the smallest share?, \_\_\_\_\_

Answer:  $\text{N}18$ \*

FBQ49: Convert 2710 to a number in base 4, \_\_\_\_\_

Answer:  $1234$ \*

FBQ50: If  $2n=128$  find the value of  $n$  \_\_\_\_\_

Answer:  $7$ \*

Multiple Choice Questions (MCQs):

MCQ1: The highest in the hierarchy of numbers is \_\_\_\_\_ numbers

Answer: natural

MCQ2: Pi is an example of \_\_\_\_\_ number

Answer: irrational

MCQ3: If  $6410 = x^5$  find  $x$ ?

Answer: 223

MCQ4: Convert 173 to base eight

Answer: 24438

MCQ5: Convert 10111012 to denary

Answer: 95

MCQ6: Convert 1345 to denary

Answer: 44

MCQ7: If  $202x = 101002$  solve for x

Answer: 5

MCQ8: Find the next term of each sequence 4, 16, 36, 64, 100

Answer: 169

MCQ9: If  $35y + 62y = 125y$  and the value of y

Answer: 4

MCQ10: Expand and simplify  $(2x - 1)(x + 3)$

Answer:  $x^2 + x - 5$

MCQ11: Perform the operation  $4^2 + 3^2 - 2^2 - 2^2$

Answer: 52

MCQ12:

Answer:  $x^2 - 6x + 9$

MCQ13: Simplify  $x^7 \cdot x^3$

Answer:  $x^{10}$

MCQ14: When solving a quadratic equation, you are looking for which of the following?

Answer: Point(s) of intersection

MCQ15: A linear system of equations made up of two intersecting lines has \_\_\_\_\_ solution(s)

Answer: two

MCQ16: If the legs of a right triangle measure 5 and 12 cm respectively, the measure of the third side is

Answer: 13 cm

MCQ17: Simplify  $4^{-2} \cdot 5^3$

Answer:  $\frac{5^3}{4^2}$

MCQ18: Find the cost of 11 bottles of cough syrup if the cost of 2 dozen of it is N 2520.

Answer: N1155

MCQ19: A quantity of food lasts 5 men for one month (30 days). For how long will it last 6 men, if their rate of eating is the same?

Answer: 25 days

MCQ20: In a class of 60 students, 42 were present. What is the percent attendance?

Answer: 70%

MCQ21: A pharmacist bought a drug for N 375 and sold it for N 420. Find his or her profit or loss percent

Answer: 14%

MCQ22:

Answer:  $x^5$

MCQ23:

Answer: 6

MCQ24:

Answer: 5

MCQ25: Given  $y+6x=3$  what is the value of  $y$  when  $x=1$

Answer: -1

MCQ26:

Answer: -2

MCQ27:

Answer:

MCQ28: An acute angle is an angle whose size is less than

Answer:  $90^\circ$

MCQ29: Find the length of the arc of a circle of radius 7cm, which subtends an angle of  $60^\circ$  at the center of the circle. (Take  $\pi=227$ )

Answer: 253cm

MCQ30: Find the angle subtended at the centre of a circle radius 6.2cm by an arc of length 12cm. (Take  $\pi=227$ )

Answer:  $10.85^\circ$

MCQ31: The square root of a number is the same as raising the number to the

Answer:  $(1/2)$  power

MCQ32: Find the circumference of a circle of radius 10cm. Take  $\pi = 3.142$

Answer: 62.84cm

MCQ33: Find the circumference and area of the circle of radius 12cm. (Take  $\pi=227$ )

Answer: 75.4cm and 42.58cm<sup>2</sup>

MCQ34: A sector is cut out of a circle of radius 21 cm. Find the length of arc. (Take  $\pi=227$ )

Answer: 60cm

MCQ35: A sector is cut out of a circle of radius 21 cm. Find the area of this sector, if the sector subtends an angle of  $120^\circ$ . (Take  $\pi=227$ )

Answer: 463cm<sup>2</sup>

MCQ36: Find the perimeter of a semicircle of radius 12.3cm. Take  $\pi = 3.142$

Answer: 6.25cm

MCQ37: A Cuboid is 10cm long, 8cm wide and 7cm high. Find the total surface area of the Cuboid

Answer: 412cm<sup>2</sup>

MCQ38: Find the volume of a 12.5cm by 10.5cm by 8.5cm box

Answer: 115.625cm<sup>3</sup>

MCQ39: If  $\log_7 x = 2$

Answer: 49

MCQ40: Evaluate  $\log_{10} 10$

Answer: 1

MCQ41: Simplify the following  $\log_a x^2 + 3\log_a x - 2\log_a 4x$

Answer:  $\log_a x^2$

MCQ42: Solve the following for x:  $2\log_a x - \log_a (x-1) = \log_a (x-1)$

Answer: 23

MCQ43: Simplify  $8x^3 - 3x^2 - 4$

Answer:  $2x^2$

MCQ44: Simplify  $2a^3b^2 \cdot a^2b^6 - ab^2$

Answer:  $a^2b^8$

MCQ45: The diameter of the base of a cylinder is 12 cm and the height is 8 cm. Find the surface area of the solid cylinder

Answer: 528 cm<sup>2</sup>

MCQ46: The ages of Isa and Adamu differ by 6 and the product of their ages is 187. Write their ages in the form (x,y) where  $x > y$ .

Answer: (12,6)

MCQ47: Find n if,  $\log_2 4 + \log_2 7 + \log_2 n = 1$

Answer: 28

MCQ48: If  $5x + 2y = 5$  and  $4x + 3y = 16$ , find  $3x + y$

Answer: 0

MCQ49: If the population of a town was 240,000 in January 1998 and it increased by 2% each year, what would be the population in 2000?

Answer: 480,000

MCQ50: If  $m = 3$ ,  $p = -3$ ,  $q = 7$  and  $r = \frac{5}{2}$ , evaluate  $m(p+q+r)$

Answer: 19