

Multiple choice exercise. For each question choose your answers from A, B, C, D or E

- The gradient of the straight line  $y = 2x - 3$  is  
A 3 B  $\frac{2}{3}$  C 2 D -3 E  $\frac{3}{2}$
  - The missing numbers in the sequence: 1, 3, 6, 10, 15, \_\_, 36 are:  
A 21, 27 B 21, 28 C 21, 29 D 20, 25 E 20, 26
  - The length of a rectangle is  $2a$ . The width is  $3b$ . Its area is:  
A  $2a + 3b$  B  $5ab$  C  $6a$  D  $6ab$  E  $ab$
  - The gradient of the line AB is:  
A -5 B  $-2\frac{1}{2}$  C  $-\frac{2}{5}$  D  $\frac{2}{5}$  E  $2\frac{1}{2}$
- 
- Given that  $5x = 4$ , then  $x =$   
A  $\frac{4}{5}$  B  $1\frac{1}{4}$  C 1.1 D  $1\frac{1}{5}$  E  $\frac{4}{5}$
  - Given that  $C = \pi d$ , then  $\pi =$   
A  $\frac{d}{C}$  B  $Cd$  C  $d - C$  D  $C - d$  E  $\frac{C}{d}$
- |            |   |   |    |
|------------|---|---|----|
| $x$        | 0 | 1 | 2  |
| $y = 3x^2$ | 0 |   | 12 |
- The table of values is for  $y = 3x^2$ . When  $x = 1$  the value of  $y$  is:
- A 3 B 4 C 6 D 8 E 9
  - $3(x + 4) - 2(x - 3) =$   
A  $x + 1$  B  $x + 6$  C  $x + 18$  D  $5x + 6$  E  $5x + 18$
  - Given that  $y = 4a - 2b$ ,  $a = -1$  and  $b = -2$  then  $y =$   
A -8 B -4 C 8 D 0 E -8

10. The cost of servicing a motorbike is £150 plus VAT at 17½%. The amount added for VAT is:

- A £10.50 B £9 C £6 D £17.50 E £12.50

- The diameter of a circle is 6cm. The area of the circle, in  $\text{cm}^2$ , is:  
A  $36\pi$  B  $9\pi$  C  $6\pi^2$  D  $9\pi^2$  E  $18\pi$
- 60% of the candidates who sat an examination passed. 300 candidates sat the exam. The number who passed is:  
A 48 B 72 C 108 D 180 E 300

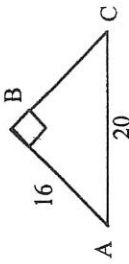
13. Given that  $2(x + 8) = 30$ , then  $x =$

- A 7 B 11 C 14 D 22 E 23

- A tower stands on horizontal ground. From a point 50m from the base of the tower, the angle of elevation of the top of the tower is  $28^\circ$ . The height of the tower is:  
[Give the answer in metres to the nearest metre.]

- A 23 B 27 C 44 D 94 E 107

15. Triangle ABC is right angled at B.



The length of BC is:

- A 10 B 12 C 14 D 16 E 18

16. The median of the numbers 9, 3, 9, 7, 2, 9, 4, 2, 9 is:

- A 2 B 4 C 6 D 7 E 9

17. There are 4 red balls and 6 blue balls in a bag. One ball is selected at random. The probability the ball is blue is:

- A  $\frac{4}{10}$  B  $\frac{3}{5}$  C  $\frac{4}{6}$  D  $\frac{2}{5}$  E  $\frac{4}{5}$

18. An approximate answer to the product of  $50.49 \times 0.48$  is:

- A 50 B 100 C 200 D 25 E 150

19. When the point  $A(2, 1)$  is translated by the column vector  $\begin{pmatrix} -4 \\ 3 \end{pmatrix}$  the image of A is at the point:

- A (6, 4) B (-8, 3) C (-3, -1) D (2, 4) E (-2, 4)

20. The volume of a cuboid of dimensions 3cm x 4cm x 5cm is  $60\text{cm}^3$ . What is the volume of a cuboid whose dimensions are all twice the size?

- A  $480\text{cm}^3$  B  $120\text{cm}^3$  C  $720\text{cm}^3$  D  $240\text{cm}^2$  E  $360\text{cm}^3$