

- Lal's normally works 8 hours a day. He is paid \$10 per hour. All overtime is at double-time. How much does he earn if he works 10 hours in one day?
A. \$80 B. \$90 C. \$100 D. \$120
- Sugar is sold in four different sized bags. Which of the following gives the best value?
A. 1kg for \$2.50 B. 2 kg for \$5 C. 3 kg for \$7.20 D. 4 kg for \$10.20
- The cash price of a laptop was \$2000. Rajen bought a laptop on terms where he paid a \$300 deposit and made monthly repayments of \$100 for 2 years. How much interest did he pay?
A. \$200 B. \$400 C. \$500 D. \$700
- The value of $2^{2025} + 2^{2025}$ is
A. 2^{2025} B. 2^{4050} C. 4^{1013} D. 4^{4050}
- This year Mohammed earns \$5 per hour at his job. For next year, this rate will increase by 10%. His new hourly rate will therefore be
A. \$5.10 B. \$5.20 C. \$5.40 D. \$5.50
- A car salesman earns \$50 commission for each car that he sells. How many cars should he sell to earn a commission of \$500?
A. 10 B. 20 C. 30 D. 40
- 2.00 pm in 24-hour time is
A. 1300 B. 1400 C. 1500 D. 1600
- When completely factorised $18 - 2m^2$ equals
A. $2(9 - m^2)$ B. $(18 - 2m)(18 + 2m)$ C. $2(m - 3)(m + 3)$ D. $2(3 - m)(3 + m)$
- Which of the following line has y-intercept of (0, 2)?
A. $y = -4x + 2$ B. $y = -2x - 4$ C. $y = 2x + 4$ D. $y = -2x + 4$
- The point (3, m) lies on the line $y = 2x + 4$. What is the value of m ?
A. 2 B. 3 C. 10 D. 12

11. A car takes 4 hours to complete a journey when travelling at 30 km/h. How long, in hours, would the same journey take if the car were travelling at 60 km/h?
- A. 1 B. 2 C. 3 D. 8
12. The gradient of the line $6x + \frac{1}{2}y = 8$ is
- A. -1 B. -3 C. -6 D. -12
13. The solution set of $3x^2 = 48$ is
- A. {4} B. {-4} C. {-4, 4} D. {-16, 16}
14. $\frac{1}{3}$ of the children in Year 6A class are girls. If there are 18 boys, how many children are there in total in Year 6A?
- A. 27 B. 25 C. 24 D. 6
15. ABCD is a square. $AB = (x + 1)$ units. The area of the square is
- A. $x^2 + 1$ B. $x^2 + 2$ C. $x^2 + 2x + 1$ D. $x^2 + 2x + 2$
16. The equation of the inverse of the function $y = \frac{1}{2}x - 3$ is
- A. $y = 2x - 6$ B. $y = 2x + 6$ C. $y = 2x + 3$ D. $y = x$
17. The equation of the asymptote of $y = 2^x$ is
- A. $y = 2$ B. $y = 1$ C. $y = 0$ D. $y = x$
18. The line $x = 0$ is the axis of symmetry of the function
- A. $y = x^3$ B. $y = |x|$ C. $y = 2^{-x}$ D. $y = \sqrt{x}$
19. When the product of x and 8 is subtracted from y , the result is 12.
The correct mathematical equation for the above is given by
- A. $8x - 10 = y$ B. $8x - y = 10$ C. $8(x - y) = 10$ D. $y - 8x = 12$
20. A meal for 4 people uses 2 eggs. How many eggs are needed if the meal is made for 6 people?
- A. 2 B. 3 C. 4 D. 6

21. $\sqrt{4^{16x}}$ equals

- A. 2^{4x} B. 4^{8x} C. $\pm 2^{4x}$ D. $\pm 2^{4x}$

22. When factorised $x^2 - 10x + 21$ equals

- A. $(x - 3)(x - 7)$ B. $(x - 3)(x + 7)$ C. $(x + 3)(x - 7)$ D. $(x - 10)(x + 21)$

23. Mr Smith invested \$1 000 at 10% compound interest per annum. How much interest will he get after 2 years?

- A. \$1210 B. \$210 C. \$200 D. \$100

24. Successive discounts of 10% and 20% are equivalent to a single discount of

- A. . 15% B. 28% C. 30% D. 72%

25. An open box is made from a square piece of cardboard with sides 12 cm by cutting a square of sides 2 cm from each corner and bending up the sides. The volume of the open box is

- A. 128 B. 130 C. 144 D. 169

26. A paint roller, in the shape of a cylinder, has radius 10 cm and length 40 cm. What area, in cm^2 , of wall is painted with one complete revolution of the roller?

- A. 600π B. 700π C. 800π D. 900π

27. If there are 20 different pairs of socks in the drawer, what is the smallest number you could reach in and grab (without looking) to guarantee you have a matching pair?

- A. 10 B. 19 C. 20 D. 21

28. Tom is 3 years younger than Anna. The sum of their ages is 15. If Tom age is x years, which of the following equations is correct?

- A. $x = 15 + 3$ B. $x + (x - 3) = 15$ C. $3x - x = 15$ D. $x + (x + 3) = 15$

29. If 3 men can complete a job in 8 days then 4 men can complete the same job in

- A. 4 days B. 5 days C. 6 days D. 24 days

30. If $a * b = a^2 - b$ then $-2 * -3 =$

- A. -7 B. -1 C. 6 D. 7