

1. What is the sum of all odd integers between 50 and 376 ?

2. The price of a radio is \$230, which includes 15% VAT. What is the amount of VAT included in this price?

3. What are the coordinates of y-intercept of the line through the points (-3, 6) and (4, 20)?

4. A rectangular box measures 60 cm by 180 cm by 270 cm. What is the length of the longest pole in centimetres that can fit in the box?

5. The surface area of a cube is 6 square metres. What would be the equivalent surface area in square centimetres?

6. Find the sum of the series $3 + 6 + 12 + \dots + 384$

7. Mr Smith invested \$980 at 10% compound interest per annum. After 3 years he received an interest of \$ k . Find the value of k to nearest 5 cents.

8. Solve $|3x - 2| + 2x = 8$

9 Simplify: $\frac{x^2 - y^2}{xy} - \frac{xy - y^2}{xy - x^2}$.

.

10. How many ways can six students stand in a straight line if two students refuse to stand next to one another?

11. Karan works a 35-hour week and is paid at an hourly rate of \$18. He gets overtime for hours worked beyond 35 hours at time-and-a-half. In a particular week, he earned \$1008. How many hours in total did Karan work in this week to earn this amount?

12. How many handshakes are there when 29 people shake hands with each other?

13. Among the 150 students at a school, 98 play rugby, 53 play soccer and 39 play both sports. How many students play neither of the two sports?

14. There are twenty different pairs of socks in a drawer. If I am randomly grabbing socks without looking, how many socks do I need to grab to make sure that I have at least one matching pair?

15. How many milliliters of distilled water should be mixed with 20 milliliters of 60% acid to obtain a mixture that is 30% acid?

16. When three numbers are added two at a time, their sums are 45, 56, and 77. What is the sum of these three numbers?

17. Given that it is 4 o'clock, exactly how long, in minutes, will it take for the minute hand to catch up with the hour hand?

- 18 In a Mathematics Competition each correctly answered question gains 7 marks while 3 marks are deducted for each incorrect answer.

Dinesh answered 20 questions and received a total of 60 marks. How many questions did he get wrong?

19. 3 employees can make 15 burgers in 10 minutes. How many employees would be needed to make 300 burgers in half an hour?

20. In numbering the pages of a book 999 digits are used. Calculate the number of pages in the book.
