

SET 1: Basic Mathematics

Tutorial 6

Solve the following equations and check the answers.

1. $4y - 28 = 0$ [Ans. $y = 7$]
2. $2a + 5 = 10 + 7a$ [Ans. $a = -1$]
3. $3(2 - 5t) = 4t - 13$ [Ans. $t = 1$]
4. $\frac{2x}{3} = \frac{11}{5}$ [Ans. $x = 3\frac{3}{10}$]
5. $2m + 6 - 5m = 0$ [Ans. $m = 2$]
6. $11m - 20 - 6m = 0$ [Ans. $m = 4$]
7. $8 - 3p = 6p - 10$ [Ans. $p = 2$]
8. $17p - 23 + 3p = 14p - 5$ [Ans. $p = 3$]
9. $5(k - 2) - 3(2k + 5) + 15 = 0$ [Ans. $k = -10$]
10. $8 + 4(a - 1) - 5(a - 3) = 2(5 - 2a)$ [Ans. $a = -3$]
11. $-42 + 6(2 - 3y) = -2(y - 1)$ [Ans. $y = -2$]
12. $\frac{3}{4}x + 2 = \frac{2}{3}x + 1 + \frac{5}{6}$ [Ans. $x = -2$]
13. $\frac{1}{5}(2m - 3) + \frac{1}{6}(m - 4) + \frac{2}{15} = 0$ [Ans. $m = 2$]
14. $\frac{1}{5m} + \frac{1}{2m} = \frac{7}{30}$ [Ans. $m = 3$]
15. $\frac{x}{4} - \frac{x + 6}{5} = \frac{x + 3}{2}$ [Ans. $x = -6$]
16. $4\sqrt{k} = 12$ [Ans. $k = 9$]
17. $\frac{3\sqrt{x}}{1 - \sqrt{x}} = -6$ [Ans. $x = 4$]
18. $\sqrt{\frac{p + 2}{p - 2}} = \frac{1}{2}$ [Ans. $p = -3\frac{1}{3}$]
19. $16 = \frac{t^2}{9}$ [Ans. $t = \pm 12$]
20. $\frac{11}{2} = 5 + \frac{8}{x^2}$ [Ans. $t = \pm 4$]

21. The sum of two numbers is 36 and their difference is 12. What are the numbers? [*Ans.* 24 and 12]
22. The sum of two numbers is 28 and one number is 3 times the other. Find the two numbers. [*Ans.* 7 and 21]
23. The perimeter of a rectangular piece of paper is 240 cm and its length is 20 cm more than its width. What are the dimensions of this piece of paper? [*Ans.* length = 70 cm, width = 50 cm]
24. A man has 2 children and he decided to buy them a smart phone and a laptop. The total cost of the phone and the laptop is OMR 400, and the laptop price is one and a half times the price of the phone. What is the price of the laptop and the phone? [*Ans.* laptop: OMR 240 and phone: OMR 160]
25. Ahmed bought 3 pens, 4 pencils and 2 erasers, and he paid a total of OMR 5.5. The price of a pen is twice the price of a pencil and it is four times the price of an eraser. Find the price of each of the pens, the pencils and the erasers. [*Ans.* pen: OMR 1.0, pencil: OMR 0.5 and eraser: OMR 0.25]