

1. Write the following numbers in scientific notation:
(a) 367,000 (b) 0.0000367
2. Write the following numbers in scientific notation:
(a) 9,690,000 (b) 0.969
3. Write the following numbers in scientific notation:
(a) 271,000,000 (b) 0.0271
4. Write in scientific notation: 6,700,000
[A] 6.7×10^6 [B] 6.7×10^8 [C] 67×10^5 [D] 6.7×10^7
5. Write the following numbers in scientific notation:
(a) 4,850,000 (b) 0.0485
6. Write the following numbers in scientific notation:
(a) 0.00000751 (b) 75,100,000
7. Write the following numbers in scientific notation:
(a) 0.483 (b) 483,000
8. Write the following numbers in scientific notation:
(a) 0.0418 (b) 418,000,000
9. Write the following numbers in scientific notation:
(a) 0.544 (b) 54,400,000
10. Write the following numbers in scientific notation:
(a) 0.00336 (b) 3,360,000

Factor:

11. $49x^2 - 16y^2$
12. $9a^2x^2y^2 - 64a^2z^2$
13. $-49 + 25y^2$
14. A bag contains 5 purple marbles and 4 blue marbles. One marble is drawn at random and not replaced. Then a second marble is drawn. What is the probability that the first marble is blue and the second one is purple?
15. Monica has a urn that contains 6 blue marbles and 12 green marbles. She randomly draws 2 marbles, one after the other. What is the probability that the first marble is green and the second marble is blue if the marbles are drawn
(a) with replacement? (b) without replacement?

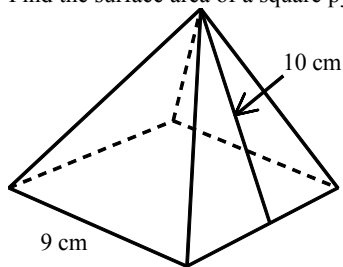
16. Donna has a jar that contains 4 green gum balls and 8 orange gum balls. She randomly draws 2 gum balls, one after the other. What is the probability both gum balls are orange if the gum balls are drawn
- (a) without replacement? (b) with replacement?

Factor.

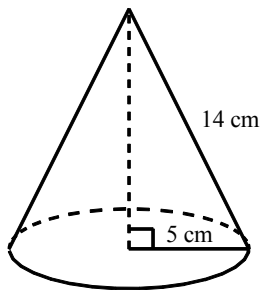
17. $(d + e)x^2 - 7x(d + e) - 18(d + e)$

18. $(c + d)y^2 + 4y(c + d) - 5(c + d)$

19. Find the surface area of a square pyramid if the length of the base is 9 cm and the slant height is 10 cm.



20. Find the surface area of a cone if the radius is 5 cm and the slant height is 14 cm.



Factor.

21. $x^2 - x - 20$

22. $x^2 + 8x + 7$

23. $2n + n^2 - 15$

24. $x^2 + x - 6$

25. $x^2 + 8x + 15$

26. $15u + u^2 + 56$