

Fractions

1. $\frac{2}{3} + \frac{1}{4} = \underline{\hspace{2cm}}$

2. $\frac{5}{6} - \frac{1}{3} = \underline{\hspace{2cm}}$

3. $\frac{3}{4} \cdot \frac{2}{9} = \underline{\hspace{2cm}}$

4. $\frac{2}{5} \cdot \frac{10}{3} = \underline{\hspace{2cm}}$

5. $\frac{1}{x} + \frac{1}{2x} = \underline{\hspace{2cm}}$

6. $\frac{1}{a} + \frac{1}{a+h} = \underline{\hspace{2cm}}$

7. $\frac{1}{a+h} - \frac{1}{a} = \underline{\hspace{2cm}}$

8. $\frac{3}{a} \cdot \frac{a}{a+h} = \underline{\hspace{2cm}}$

Exponents

9. $2^3 \cdot 2^4 = \underline{\hspace{2cm}}$

10. $\frac{5^6}{5^2} = \underline{\hspace{2cm}}$

11. $(3^2)^3 = \underline{\hspace{2cm}}$

12. $x^0 \quad (x \neq 0) = \underline{\hspace{2cm}}$

13. $2^{-3} = \underline{\hspace{2cm}}$

14. $(2x^3)^2 = \underline{\hspace{2cm}}$

15. $\frac{x^5 y^2}{x^2 y^5} = \underline{\hspace{2cm}}$

16. $x^3 \cdot x^{-5} = \underline{\hspace{2cm}}$

17. $(x^{-2})^{-3} = \underline{\hspace{2cm}}$

18. $\frac{x^4 y^{-1}}{x^{-3} y^2} = \underline{\hspace{2cm}}$

19. $(3x^2 y^{-1})^{-2} = \underline{\hspace{2cm}}$

20. $\left(\frac{x^3}{x^{-1}}\right)^2 = \underline{\hspace{2cm}}$

Polynomials

21. $(3x^2 + 5x - 2) + (x^2 - 4x + 7) = \underline{\hspace{2cm}}$

22. $(4x^2 - 3x + 1) - (2x^2 + x - 5) = \underline{\hspace{2cm}}$

23. $3x(2x^2 - 5x + 1) = \underline{\hspace{2cm}}$

24. $(x + 3)(x - 2) = \underline{\hspace{2cm}}$

25. $(2x - 1)(x + 4) = \underline{\hspace{2cm}}$

Factoring

26. $x^2 - 9 = \underline{\hspace{2cm}}$

27. $x^2 + 5x + 6 = \underline{\hspace{2cm}}$

28. $2x^2 + 6x = \underline{\hspace{2cm}}$

29. $x^2 - 6x + 9 = \underline{\hspace{2cm}}$

Answer Bank

1. $\frac{11}{12}$
2. $\frac{1}{2}$
3. $\frac{1}{6}$
4. $\frac{4}{3}$
5. $\frac{3}{2x}$
6. $\frac{2a+h}{a(a+h)}$
7. $\frac{-h}{a(a+h)}$
8. $\frac{3}{a+h}$
9. 128
10. 625
11. 729
12. 1
13. $\frac{1}{8}$
14. $4x^6$
15. $\frac{x^3}{y^3}$
16. $\frac{1}{x^2}$
17. x^6
18. $\frac{x^7}{y^3}$
19. $\frac{y^2}{9x^4}$
20. x^8
21. $4x^2 + x + 5$
22. $2x^2 - 4x + 6$
23. $6x^3 - 15x^2 + 3x$
24. $x^2 + x - 6$
25. $2x^2 + 7x - 4$

26. $(x - 3)(x + 3)$

27. $(x + 2)(x + 3)$

28. $2x(x + 3)$

29. $(x - 3)^2$