

State whether each expression is a polynomial. If the expression is a polynomial, identify it as a *monomial*, a *binomial*, or a *trinomial*.

1) 14

4) $\frac{1}{3}x^2 + x - 2$

2) $\frac{16m^2}{p} + p^3$

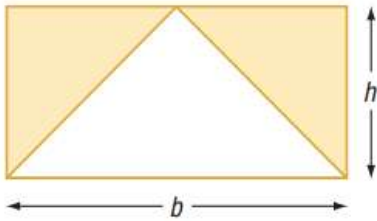
5) $6gh^2 - 4g^2h + g$

3) $7b - 3.2c + 8b$

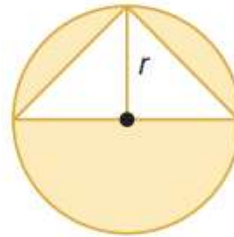
6) $-4 + 2a + \frac{5}{a^2}$

Write a polynomial to represent the area of each shaded region.

7)



8)



Find the degree of each polynomial.

9) $4ab$

15) $15 - 8ag$

10) $5x^3$

16) $3a^2b^3c^4 - 18a^5c$

11) $9y$

17) $2x^3 - 4y + 7xy$

12) -13

18) $3z^5 - 2x^2y^3z - 4x^2z$

13) $c^4 + 7c^2$

19) $11r^2t^4 - 2s^4t^5 + 24$

14) $6n^3 - n^2p^2$

Arrange the terms of each polynomial so that the powers of x are in ascending order.

20) $c^2x^3 - c^3x^2 + 8c$

21) $10x^3y^2 - 3x^9y + 5y^4 + 2x^2$

Arrange the terms of each polynomial so that the powers of x are in descending order.

22) $5 + x^5 + 3x^3$

24) $8x - 9x^2y + 7y^2 - 2x^4$

23) $b^2 + x^2 - 2xb$

25) $-8a^5x + 2ax^4 - 5 - a^2x^2$

Simplify. Assume no denominator is equal to zero.

26) $a^0 b^{-2} c^{-1}$

28) $\left(\frac{4x^3 y^2}{3z}\right)^2$

27) $\frac{-5n^5}{n^8}$

29) $\frac{(-y)^5 m^8}{y^3 m^{-7}}$

Express each number in scientific notation.

30) 12,300,000

31) 0.00345

32) 12×10^6

33) 0.77×10^{-10}