

- The sum of  $3x^2 + x + 8$  and  $x^2 - 9$  can be expressed as
  - $4x^2 + x - 1$
  - $4x^2 + x - 17$
  - $4x^4 + x - 1$
  - $3x^4 + x - 1$
- The sum of  $3x^2 + 4x - 2$  and  $x^2 - 5x + 3$  is
  - $4x^2 + x - 1$
  - $4x^2 - x + 1$
  - $4x^2 + x + 1$
  - $4x^2 - x - 1$
- The product of  $2x^3$  and  $6x^5$  is
  - $10x^8$
  - $12x^8$
  - $10x^{15}$
  - $12x^{15}$
- When  $3x^2 - 2x + 1$  is subtracted from  $2x^2 + 7x + 5$ , the result will be
  - $-x^2 + 9x + 4$
  - $x^2 - 9x - 4$
  - $-x^2 + 5x + 6$
  - $x^2 + 5x + 6$
- If  $2x^2 - 4x + 6$  is subtracted from  $5x^2 + 8x - 2$ , the difference is
  - $3x^2 + 12x - 8$
  - $-3x^2 - 12x + 8$
  - $3x^2 + 4x + 4$
  - $-3x^2 + 4x + 4$
- The expression  $(x^2z^3)(xy^2z)$  is equivalent to
  - $x^2y^2z^3$
  - $x^3y^2z^4$
  - $x^3y^3z^4$
  - $x^4y^2z^5$
- When  $3a^2 - 2a + 5$  is subtracted from  $a^2 + a - 1$ , the result is
  - $2a^2 - 3a + 6$
  - $-2a^2 + 3a - 6$
  - $2a^2 - 3a - 6$
  - $-2a^2 + 3a + 6$

8. The product of  $3x^2y$  and  $-4xy^3$  is
1.  $-12x^3y^4$
  2.  $12x^3y^4$
  3.  $-12x^2y^3$
  4.  $12x^2y^3$
9. When  $-2x^2 + 4x + 2$  is subtracted from  $x^2 + 6x - 4$ , the result is
1.  $-3x^2 - 2x + 6$
  2.  $-x^2 + 10x - 2$
  3.  $2x^2 - 2x - 6$
  4.  $3x^2 + 2x - 6$
10. If  $2x^2 - x + 6$  is subtracted from  $x^2 + 3x - 2$ , the result is
1.  $x^2 + 2x - 8$
  2.  $x^2 - 4x + 8$
  3.  $-x^2 + 2x - 8$
  4.  $-x^2 + 4x - 8$
11. The expression  $(3x^2 + 2xy + 7) - (6x^2 - 4xy + 3)$  is equivalent to
1.  $-3x^2 - 2xy + 4$
  2.  $3x^2 - 2xy + 4$
  3.  $-3x^2 + 6xy + 4$
  4.  $3x^2 - 6xy - 4$
12. When  $3x^2 - 8x$  is subtracted from  $2x^2 + 3x$ , the difference is
1.  $-x^2 + 11x$
  2.  $x^2 - 11x$
  3.  $-x^2 - 5x$
  4.  $x^2 - 5x$
13. Expressed in simplest form,  $(3x^3)(2y)^2(4x^4)$  is equivalent to
1.  $24x^{12}y^2$
  2.  $24x^7y^2$
  3.  $48x^{12}y^2$
  4.  $48x^7y^2$
14. The expression  $(x^2 - 5x - 2) - (-6x^2 - 7x - 3)$  is equivalent to
1.  $7x^2 - 12x - 5$
  2.  $7x^2 - 2x + 1$
  3.  $7x^2 + 2x + 1$
  4.  $7x^2 + 2x - 5$

15. The length of a side of a square window in Jessica's bedroom is represented by  $2x - 1$ . Which expression represents the area of the window?
1.  $2x^2 + 1$
  2.  $4x^2 + 1$
  3.  $4x^2 + 4x - 1$
  4.  $4x^2 - 4x + 1$
16. When  $3a^2 - 7a + 6$  is subtracted from  $4a^2 - 3a + 4$ , the result is
1.  $a^2 + 4a - 2$
  2.  $a^2 - 10a - 2$
  3.  $-a^2 - 4a + 2$
  4.  $7a^2 - 10a + 10$
17. What is the product of  $\frac{1}{3}x^2y$  and  $\frac{1}{6}xy^3$ ?
1.  $\frac{1}{2}x^2y^3$
  2.  $\frac{1}{9}x^3y^4$
  3.  $\frac{1}{18}x^2y^3$
  4.  $\frac{1}{18}x^3y^4$
18. What is the product of  $10x^4y^2$  and  $3xy^3$ ?
1.  $30x^4y^5$
  2.  $30x^4y^6$
  3.  $30x^5y^5$
  4.  $30x^5y^6$

19. The expression  $(2x^2 + 6x + 5) - (6x^2 + 3x + 5)$  is equivalent to

1.  $-4x^2 + 3x$
2.  $4x^2 - 3x$
3.  $-4x^2 - 3x + 10$
4.  $4x^2 + 3x - 10$

20. The expression  $(6x^3y^6)^2$  is equivalent to

1.  $36x^6y^{12}$
2.  $36x^5y^8$
3.  $12x^6y^{12}$
4.  $6x^6y^{12}$