

LESSON
9.1**Practice**

For use with pages 554–560

Write the polynomial so that the exponents decrease from left to right.
Identify the degree and leading coefficient of the polynomial.

1. $4n^5$

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

3. $6y^3 - 2y^2 + 4y^4 - 5$

Tell whether the expression is a polynomial. If it is a polynomial, find its degree and classify it by the number of its terms. Otherwise, tell why it is not a polynomial.

4. 10^x

5. $-6n^2 - n^3 + 4$

6. $w^{-3} + 5$

Find the sum or difference.

7. $(3z^2 + z - 4) + (2z^2 + 2z - 3)$

8. $(8c^2 - 4c + 1) + (-3c^2 + c + 5)$

9. $(2x^2 + 5x - 1) + (x^2 - 5x + 7)$

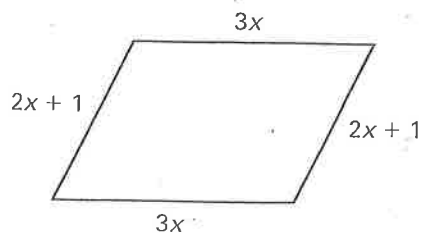
10. $(10b^2 - 3b + 2) - (4b^2 + 5b + 1)$

11. $(-4m^2 + 3m - 1) - (m + 2)$

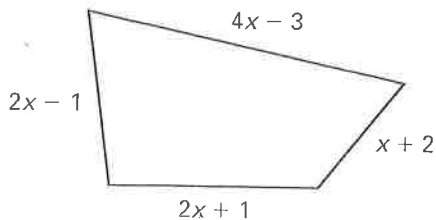
12. $(3m + 4) - (2m^2 - 6m + 5)$

Write a polynomial that represents the perimeter of the figure.

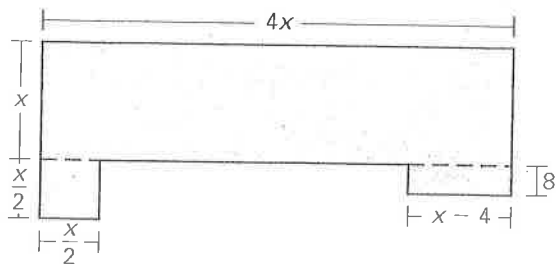
13.



14.

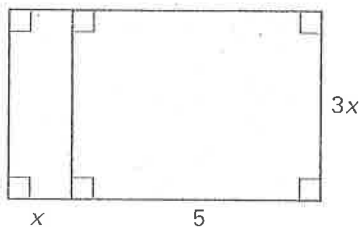


15. **Floor Plan** The first floor of a home has the floor plan shown. Find the area of the first floor.

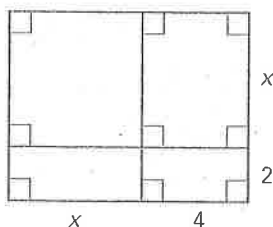


Write a polynomial for the area of the shaded region.

19.

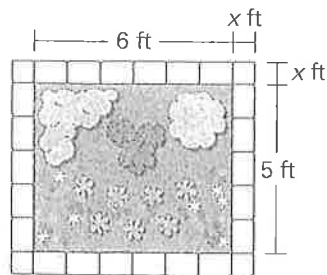


20.



21. **Flower Bed** You are designing a rectangular flower bed that you will border using brick pavers. The width of the border around the bed will be the same on every side, as shown.

a. Write a polynomial that represents the total area of the flower bed and the border.



b. Find the total area of the flower bed and border when the width of the border is 1.5 feet.

Name _____

Date _____

LESSON
9.2**Practice**

For use with pages 561–568

Find the product.

1. $x^2(6x^2 - 3x - 1)$

2. $-5a^3(4a^4 - 3a + 1)$

3. $4d^2(-2d^3 + 5d^2 - 6d + 2)$

4. $(3x + 1)(2x - 5)$

5. $(2y + 3)(y - 5)$

6. $(6a - 3)(4a - 1)$

7. $(b - 8)(5b - 2)$

8. $(8m + 7)(2m + 3)$

9. $(-p + 2)(3p^2 + 1)$

10. $(2z - 7)(-z + 3)$

11. $(-3d + 10)(2d - 1)$

12. $(n + 1)(n^2 + 4n + 5)$

13. $(w - 3)(w^2 + 8w + 1)$

14. $(2s + 5)(s^2 + 3s - 1)$

15. $(x^2 - 4xy + y^2)(5xy)$

Simplify the expression.

16. $a(3a + 1) + (a + 1)(a - 1)$

17. $(x + 2)(x + 5) - x(4x - 1)$

18. $(m + 7)(m - 3) + (m - 4)(m + 5)$

Name _____

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LESSON
9.3**Practice**

For use with pages 569–574

Find the product of the square of the binomial.

1. $(x - 9)^2$

2. $(m + 11)^2$

3. $(5s + 2)^2$

4. $(3m + 7)^2$

5. $(4p - 5)^2$

6. $(7a - 6)^2$

7. $(10z - 3)^2$

8. $(2x + y)^2$

9. $(3y - x)^2$

Find the product of the sum and difference.

10. $(a - 9)(a + 9)$

11. $(z - 20)(z + 20)$

12. $(5r + 1)(5r - 1)$

13. $(6m + 10)(6m - 10)$

14. $(7p - 2)(7p + 2)$

15. $(9c - 1)(9c + 1)$

16. $(4x + 3)(4x - 3)$

17. $(4 - w)(4 + w)$

18. $(5 - 2y)(5 + 2y)$