

## Section 5.2

Page 222-224

6. From the list, which terms are like  $8x$ ?  
 $-3x, 5x^2, 4, 3x, 9, -11x^2, 7x, -3$   
 Explain how you know they are like terms.

7. From the list, which terms are like  $-2n^2$ ?  
 $3n, -n^2, -2, 4n, 2n^2, -2, 3, 5n^2$   
 Explain how you know they are like terms.

8. For each part, combine tiles that represent like terms.  
 Write the simplified polynomial.



9. Identify the equivalent polynomials in the diagrams below. Justify your answers.



11) Simplify each of the following expressions

a)  $2c + 3 + 3c + 1$

b)  $2x^2 + 3x - 5x$

c)  $3f^2 + 3 - 6f^2 - 2$

d)  $3b^2 - 2b + 5b + 4b^2 + 1$

e)  $5t - 4 - 2t^2 + 3 + 6t^2$

f)  $4a - a^2 + 3a - 4 + 2a^2$

12. Simplify each polynomial.

a)  $2m + 4 - 3m - 8$

b)  $4 - 5x + 6x - 2$

c)  $3g - 6 - 2g + 9$

d)  $-5 + 1 + h - 4h$

e)  $-6n - 5n - 4 - 7$

f)  $3s - 4s - 5 - 6$

13. Simplify each polynomial.

a)  $6 - 3x + x^2 + 9 - x$

b)  $5m - 2m^2 - m^2 + 5m$

c)  $5x - x^2 + 3x + x^2 - 7$

d)  $3p^2 - 2p + 4 + p^2 + 3$

e)  $a^2 - 2a - 4 + 2a - a^2 + 4$

f)  $-6x^2 + 17x - 4 - 3x^2 + 8 - 12x$

14. Simplify each polynomial.

a)  $3x^2 + 5y - 2x^2 - 1 - y$

b)  $pq - 1 - p^2 + 5p - 5pq - 2p$

c)  $5x^2 + 3xy - 2y - x^2 - 7x + 4xy$

d)  $3r^2 - rs + 5s + r^2 - 2rs - 4s$

e)  $4gh + 7 - 2g^2 - 3gh - 11 + 6g$

f)  $-5s + st - 4s^2 - 12st + 10s - 2s^2$

15. Identify the equivalent polynomials.

Justify your answers.

a)  $1 + 5x$

b)  $6 - 2x + x^2 - 1 - x + x^2$

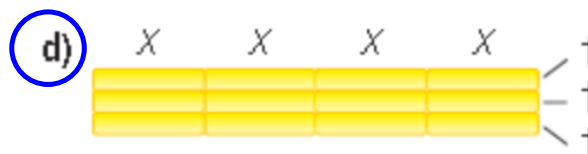
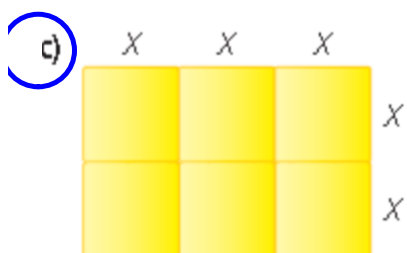
c)  $4x^2 - 7x + 1 - 7x^2 + 2x + 3$

d)  $4 - 5x - 3x^2$

e)  $2x^2 - 3x + 5$

f)  $3x + 2x^2 + 1 - 2x^2 + 2x$

19. Write a polynomial to represent the perimeter of each rectangle.



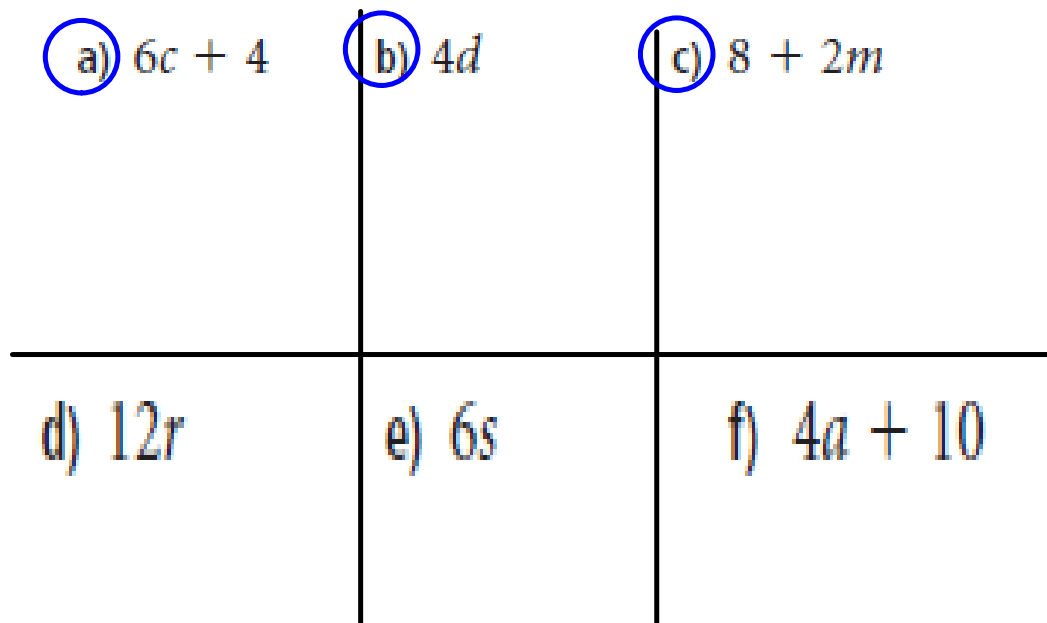


20. Each polynomial below represents the perimeter of a rectangle. Use algebra tiles to make the rectangle. Sketch the tiles. How many different rectangles can you make each time?

a)  $6c + 4$

b)  $4d$

c)  $8 + 2m$



22. Write a polynomial for the perimeter of this shape. Simplify the polynomial.

