

Name \_\_\_\_\_ Date \_\_\_\_\_

## Master 5.19

## Extra Practice 1

## Lesson 5.1: Modelling Polynomials

- Identify the polynomials in the following expressions.  
a)  $2m^2 + 1$     b)  $3x^{\frac{1}{2}}$     c)  $-4x$     d)  $\frac{1}{x^2+x}$     e)  $0.25y^2$
- Name the coefficients, variable, degree, and constant term of each polynomial.  
a)  $-8y$     b)  $12$     c)  $-2b^2 - b + 10$     d)  $-4 - b$
- Identify each polynomial as a monomial, binomial, or trinomial.  
a)  $19t$     b)  $g - 4g^2 + 5$     c)  $-1 + xy + y^2$     d)  $4 - 11w$
- Identify the equivalent polynomials.  
a)  $-h^2 - 3 + 4h$     b)  $-3 + 4h - h^2$   
c)  $5m - 3$     d)  $-2 + y^2 + 5xy$   
e)  $y^2 + 5xy - 2$     f)  $-3 + 5m$
- Use algebra tiles to model each polynomial. Sketch the tiles.  
a)  $-5 + y^2$     b)  $2x - 1$     c)  $-3a^2 - 2a + 1$     d)  $3z$     e)  $v^2 - 4v$
- Write a polynomial to match the following conditions.  
a) 2 terms, degree 1, with a constant term of 4  
b) 3 terms, degree 2, with the coefficient on the 2nd degree term  $-2$

Name \_\_\_\_\_ Date \_\_\_\_\_

## Master 5.20

## Extra Practice 2

## Lesson 5.2: Like Terms and Unlike Terms

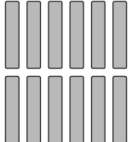
- From the list, identify terms that are like  $2w^2$ . Explain how you know they are like terms.  
 $-5w, -6w^2, -2, 4w, 3w^2, -w^2, 11w, 2$
- Use algebra tiles to model each polynomial, then combine like terms.  
 Sketch the tiles for the simplified polynomial.
 

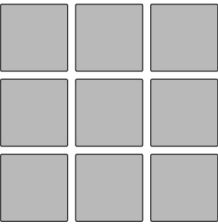
<p>a) <math>4 + x + 1 + 5x + 1</math></p> <p>c) <math>2x^2 + 8 - 11 - 4x^2 + 5x^2</math></p>	<p>b) <math>-3y^2 + 3y - 2</math></p> <p>d) <math>3y + 7y^2 + 1 - y - 2y - 3y^2</math></p>
--	--
- Simplify each polynomial.
 

<p>a) <math>7d - 2d + 1 - 6</math></p> <p>c) <math>-4 + 2a + 7 - 4a</math></p>	<p>b) <math>-5 - 3 - k - 5k</math></p> <p>d) <math>3p - 6 - 4p + 6</math></p>
--	---
- Simplify each polynomial.
 

<p>a) <math>3a^2 - 2a - 4 + 2a - 3a^2 + 5</math></p> <p>c) <math>d^2 + 3d + 1 + 4d^2 + 2</math></p>	<p>b) <math>7z - z^2 + 3 + z^2 - 7</math></p> <p>d) <math>-6x^2 + 10x - 4 + 4 - 12x - 7x^2</math></p>
---	---
- Identify the equivalent polynomials. Justify your responses.
 

<p>a) <math>-5y^2 - 3y - 4</math></p> <p>c) <math>1 + x - x^2</math></p> <p>e) <math>-7 + 5x - 7x - 8 + 14 + 12x</math></p>	<p>b) <math>10x - 1</math></p> <p>d) <math>2y^2 - 4 - 16 - 7y^2 - 3y + 16</math></p> <p>f) <math>5x^2 + 7 + 4x - 6x^2 - 6 - x - 2x</math></p>
---	---
- Write a polynomial to represent the perimeter of each rectangle.
 

a) 

b) 

Master 5.25

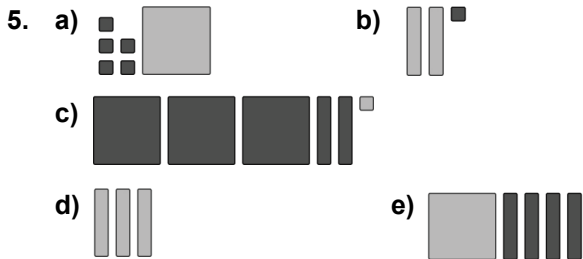
Extra Practice Sample Answers

Extra Practice 1 – Master 5.19

Lesson 5.1

- $2m^2 + 1, -4x, 0.25y^2$
- coefficient  $-8$ ; variable  $y$ ; degree 1; no constant term
  - no coefficient; no variable; degree 0; constant term 12
  - coefficients  $-2, -1$ ; variable  $b$ ; degree 2; constant term 10
  - coefficient  $-1$ ; variable  $b$ ; degree 1; constant term  $-4$
- monomial
  - trinomial
  - trinomial
  - binomial




4. a and b; e and d; c and f



- Answers will vary.
  - $3m + 4$
  - $-2y^2 + 5y - 1$

Extra Practice 2 – Master 5.20

Lesson 5.2

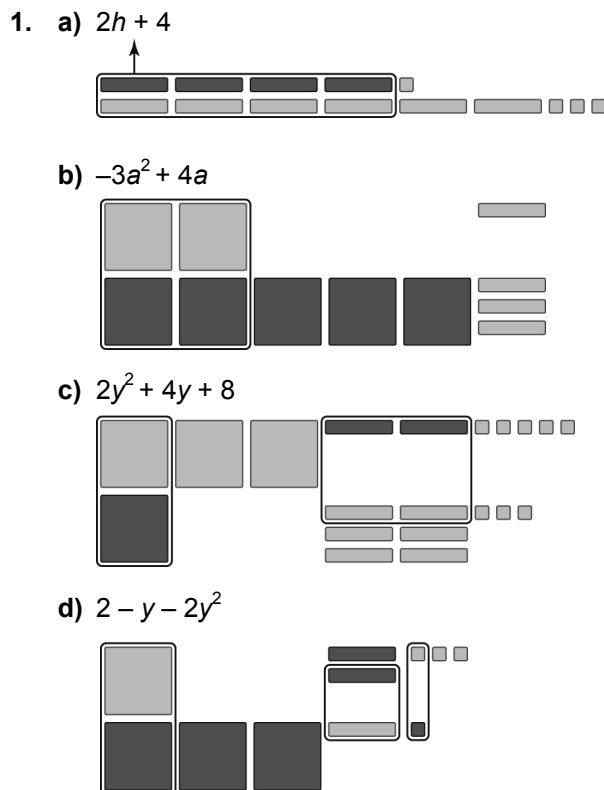
- $-6w^2, 3w^2, -w^2$ ; like terms have the same variable raised to the same exponent.
- $6x + 6$   

  - $-3y^2 + 3y - 2$   

  - $3x^2 - 3$   




- $5d - 5$
  - $-8 - 6k$
  - $-2a + 3$
  - $-p$
- 1
  - $7z - 4$
  - $5d^2 + 3d + 3$
  - $-13x^2 - 2x$
- a and d; b and e; c and f; each has the same terms with the same coefficients, variables raised to the same exponent.
- $4x + 12$
  - $12x$

Extra Practice 3 – Master 5.21

Lesson 5.3



- $3x - 3$
  - $2b^2$
  - $-6y^2 + 8y$
  - $2n^2 + 4$
- $-5x - 3$
  - $-4x^2 - 4$
  - $-6x$
  - $x^2 + 2$