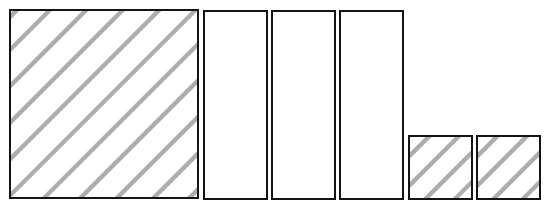
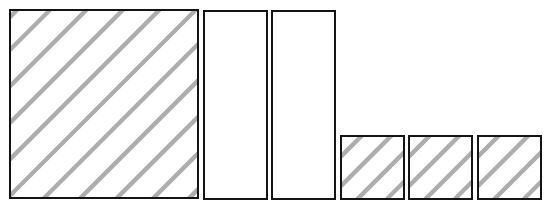
Chapter 4 Review

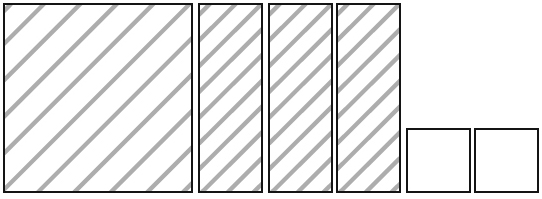
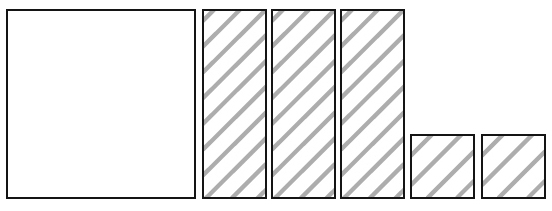
*For #1 to 4, choose the best answer.*

**1.** Which diagram represents the expression   
*x*2 – 3*x* + 2?

**A**  **B**



**C**  **D**



**2.** Which expression is an example of a polynomial with a degree of 2?

**A** 2*x* **B** 4 – 3*x*

**C** 3*xy* + 5*x* **D** *x*2*y* + 3*x* + 7

**3.** Which expression can be classified as a trinomial?

**A** *x*2*y* + *xy*2 + *x* + *y* **B** *x* + *y* + *z*

**C** 5*x*3 + 7 **D** 3*x*

**4.** Devin was asked to subtract the expressions 5*x* – 7 and –2*x* + 6. His work is shown below.

(5*x* – 7) – (–2*x* + 6) Step 1

= 5*x* – 7 + 2*x* + 6 Step 2

= 5*x* + 2*x* – 7 + 6 Step 3

= 7*x* – 1 Step 4

In which Step did Devin make his first mistake? Correct his mistake by solving it

**A** Step 1 **B** Step 2

**C** Step 3 **D** Step 4

(5x – 7) – (-2x – 6)

= 5x – 7 + 2x – 6

= 5x + 2x -7 – 6

= 7x - 13

*Complete the statements in #5 to 7.*

**5.** The degree of the constant term 6 is \_\_\_\_0\_\_\_\_.

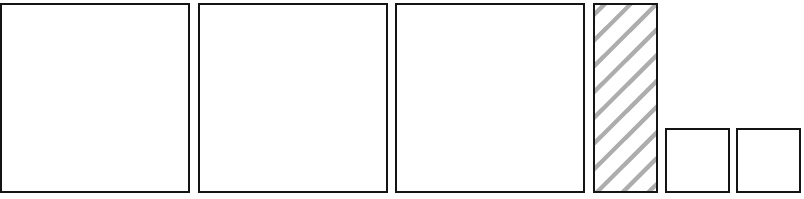
**6.** The coefficient of the term *x* is \_\_\_\_1\_\_\_\_.

**7.** In the monomial –5*x*2, the coefficient is \_\_\_\_-5\_\_\_ and variable is \_\_\_\_x\_\_\_.

**Short Answer**

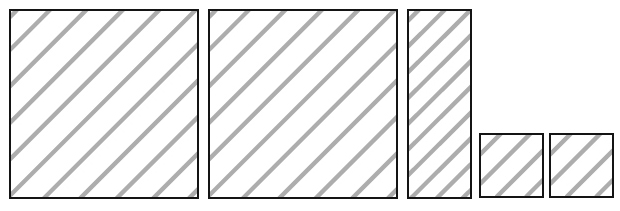
**8.** Write an expression that is represented by the tiles below.

= -3x2 + x - 2

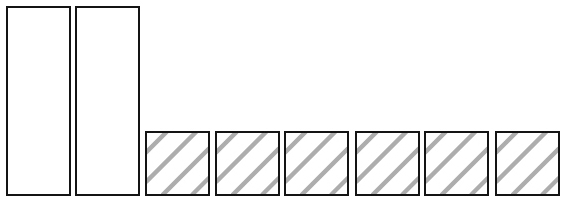


**9.** Match each expression on the left with its equivalent expression or model.

**a)** 4*x* + 11 – 5 – 6*x* **A**



**b)** *x* – 2*x*2 + 4 **B**



**c)** 3*x*2 – 1 + 5*x* + 3 – *x*2 – 4*x* **C** –2*x* + 5

**d)** –(–5 + 2*x*) **D** –2*x*2 + *x* + 4

**10.** For the expression (2*x*2 – 3*x* + 1) + (–*x*2 + 5*x* + 2), solve algebraically. Also show your final answer in tile format.

2x2 – 3x + 1 – x2 + 5x + 2

= x2 + 2x + 3

**Extended Response**

**11.** Jared wants to have his birthday party at the movies. The special event price of a movie ticket is $8.50 plus $4 for popcorn and a drink. The cost to rent the party room after the movie is $50 plus $5 per person for pop and cake.

**a)** Write an expression to represent the cost of movie tickets with popcorn and a drink.

$8.50 + $4 = $12.50

**b)** Write an expression to represent the cost of renting the party room and having pop and cake.

5n + 50

**c)** What is the simplified expression for the total cost of Jared’s birthday party?

$8.50 + $4 + $5 = $17.50

**d)** How much would it cost for Jared’s birthday at the movies, including the party room, for Jared and five friends?

$17.50 x 6 + $50 = $155

**12.** Leah simplified the expression . Which of the following best describes the final answer?

**A** monomial **B** binomial

**C** trinomial **D** constant

**13.** Which of the equations best shows the use of the distributive property?

**A** 3(4*x +*2*x*) = 3(6*x*) **B** 5(2 – 3*x*) = 5(–3*x +* 2)

**C** 2(–*x* + 4) = (–*x* + 4)2 **D** 4(2*x* – 7) = (4)(2*x*) + (4)(–7)

*Complete the statements in #5 to 7*.

**14.** The product (–3.7*x*)(5.1*y*), in simplified form, is -18.87xy.

**15.** The quotient 10*x*2÷ 4*x*, in simplified decimal form, is 2.5x.

**16.** Multiplying the polynomial *x* – 6 by 5*x* produces the expression 4x2 -30x.

**Short Answer**

**17.** Write each product in simplified form.

**a)** (5*x*)(3*x*) = 15x2 **b)** (–4*x* + 5) (–2*y*) = 8xy – 10y

**18.** Write each product in simplified form.

**a)**  = 9x **b)**  = -8 + 2x

**19.** Multiply the following 2*x* – 1 and –2*x*.

**20.** Sergio wanted to determine 5*x*(7*x* – 2). His solution is shown below.

(5*x*) (7*x*) + (5*x*) (–2) Step 1

= (5)(7)(*x*)(*x*) + (5) (–2) (*x*) (–2) Step 2

= 35*x*2 – 10(–2*x*) Step 3

= *x* 35*x*2+ 20*x* Step 4

Sergio discovered an error in his solution.

In which step did Sergio make the error? Show the correct solution.

Sergio made the mistake in Step 2. The correct solution is this.

(5x) (7x) + (5x) (-2)

= (5) (7) (x) (x) + (5) (-2) (x)

= 35x2 – 10x