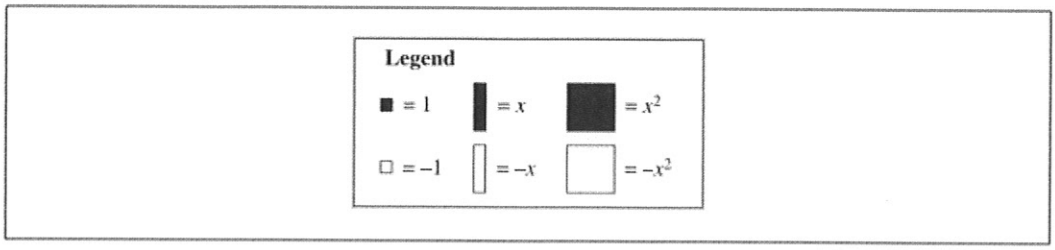
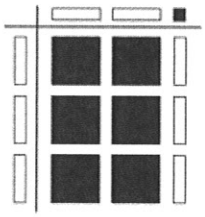
Ch. 5 &
6
Review

1.

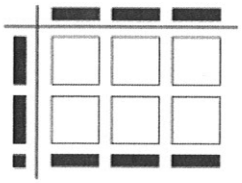


Which of the following models could be used to represent the division of $6x^2 - 3x$ by $-3x$?

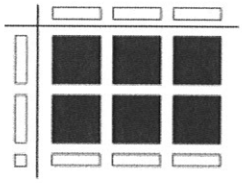
A.



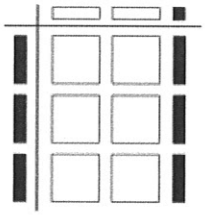
B.



C.

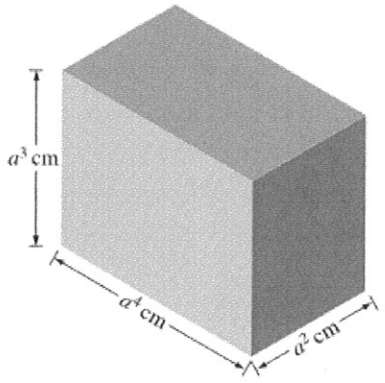


D.



2.

The shortest edge of the rectangular prism shown below is 64 cm.



Note: The diagram shown above has **not** been drawn to scale.

The length of the longest edge is

A. 256 cm
B. 512 cm
C. 1 024 cm
D. 4 096 cm

3.

Alice works 8 hours a day as a waitress in a restaurant. She earns $12.50 an hour plus money received from tips, t.

Which of the following equations represents Alice's total earnings, E, for one day of work?

A. $E = 8(12.50) + t$
B. $E = 8(12.50 + t)$
C. $E = 8t + 12.50$
D. $E = 8 + 12.50t$

4.

When the expression $(x^2 - 5x + 4) - (3x^2 + 8x - 20)$ is simplified, the result is

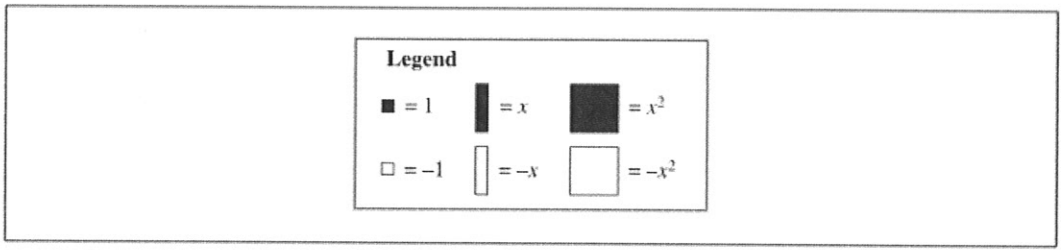
A. $-2x^2 - 13x + 24$

B. $-2x^2 - 3x + 16$

C. $2x^2 + 13x - 24$

D. $2x^2 + 3x - 16$

5.



Which of the following pairs of expressions represents like terms?

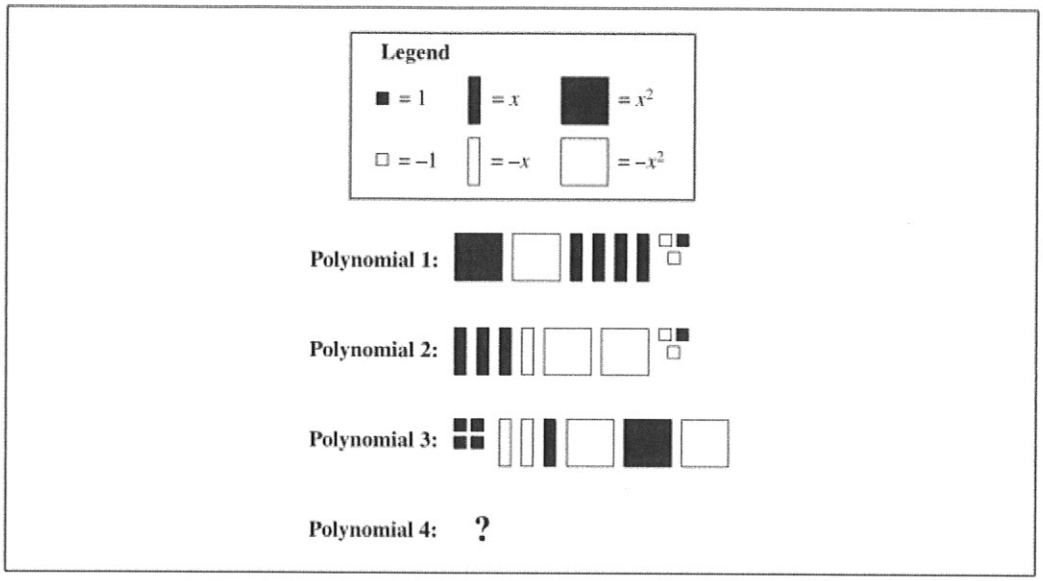
A. $3x$ and ■■■

B. $-6x^2$ and □□□□

C. $-2(4x)$ and ■■■■

D. $4(-1x)$ and ▬▬▬

6.



Which of the following expressions could represent Polynomial 4 if the sum of all four expressions is $6x$?

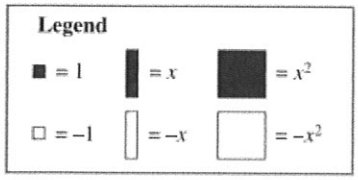
A. $9x^2 - 5x - 1$

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

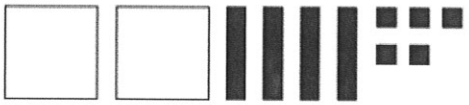
C. $-x^2 - x + 5$

D. $-3x^2 + 11x + 1$

7.



The diagram below is a model of a polynomial expression.



Which of the following rows correctly describes the modelled polynomial expression?

	Number of Terms	Degree
A.	2	2
B.	2	4
C.	3	2
D.	3	4

8.

The simplified form of $6(m - 2n) - (4m - 5n)$ is

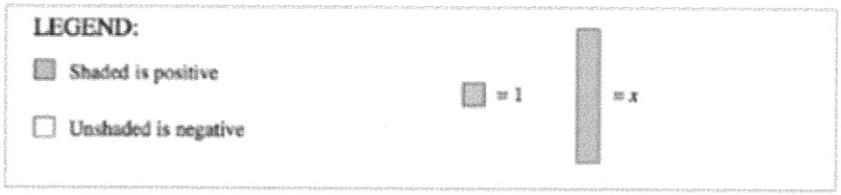
A. $10m - 7n$

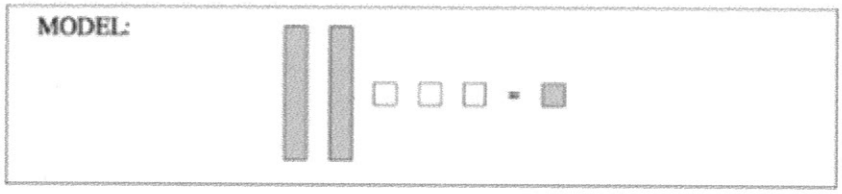
B. $10m - 17n$

C. $2m - 17n$

D. $2m - 7n$

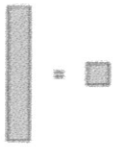
9.



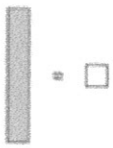


The solution to the equation represented by the algebra-tile model above is

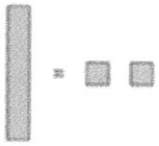
A.



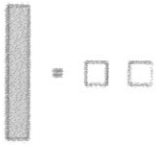
B.



C.



D.



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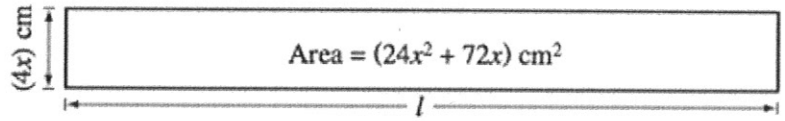
10.



The length, l, of the rectangle shown above is

A. $(6x + 18)$ cm

B. $(20x + 68)$ cm

C. $(6x^2 + 18x)$ cm

D. $(24x^2 + 68x)$ cm

11.

Pierre's class and Corissa's class have the same ratio of boys to girls. Pierre's class has 18 boys and 12 girls. If Corissa's class has 15 boys, then how many girls are in Corissa's class?

A. 6
B. 9
C. 10
D. 15

12.

If $x = 2y$, then what is the value of $\frac{12x + 4y}{2y}$?

A. 28
B. 24
C. 14
D. 12

13.

Ali plays basketball on Monday, Tuesday, Wednesday, and Thursday. She plays basketball for 42 minutes on Monday, 32 minutes on Tuesday, and 50 minutes on Wednesday.

If the average number of minutes that Ali played basketball from Monday to Thursday was 45 minutes, then how many minutes did she play basketball on Thursday?

A. 56
B. 42
C. 41
D. 31

14.

Kim and Jan scored a total of 234 points in a game. Jan scored 10 more points than Kim. If Kim's score is represented by x, then an equation that represents the total points scored by Kim and Jan is

A. $x - 10 = 234$

B. $x + 10 = 234$

C. $2x - 10 = 234$

D. $2x + 10 = 234$

15.

Numerical Response

Brent is 7 years younger than Gail. In 3 years, the sum of their ages will be 83. What is Brent's age now?

(Record your answer in the numerical-response section on the answer sheet.)

16.

The perimeter of a triangle is $24x - 6$. The lengths of two sides of the triangle are represented by the expressions $5x - 7$ and $2x + 5$.

Which of the following expressions represents the length of the third side of the triangle?

A. $17x + 8$

B. $17x - 8$

C. $17x + 4$

D. $17x - 4$

17.

Francis has an equal number of nickels, dimes, and quarters. If she has \$4.40 in coins, then the total number of nickels that she has is

A. 33

B. 30

C. 11

D. 10

18.

A student completed the following four steps to solve the equation $\frac{x}{40} + \frac{x}{60} = 1$. However, in one of the steps the student makes a mistake.

Step 1 $120\left(\frac{x}{40} + \frac{x}{60}\right) = 1$

Step 2 $\frac{120x}{40} + \frac{120x}{60} = 1$

Step 3 $3x + 2x = 1$

Step 4 $5x = 1$

Solution $x = \frac{1}{5}$

In which step was the mistake made in solving the equation?

A. Step 1
B. Step 2
C. Step 3
D. Step 4

19.

If the expression $-3x + 5 + x - 8 + 5x - 7$ is simplified, which of the following rows identifies the coefficient and the constant?

Row	Coefficient	Constant
A.	3	10
B.	3	−10
C.	−3	10
D.	−3	−10