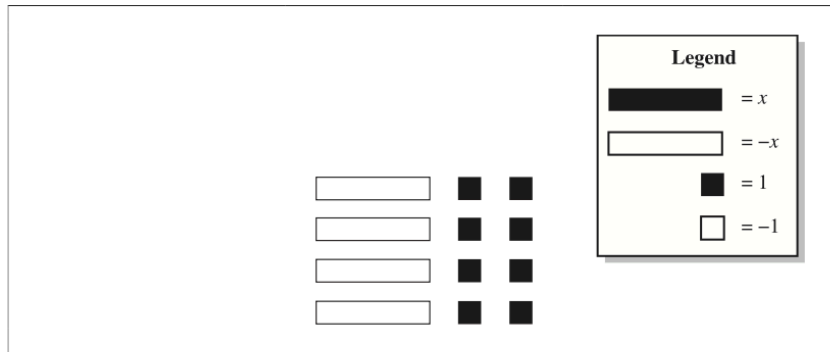


Pattern and Relation 7

Name: _____

Use the following algebra-tile diagram to answer question 9.



9. The algebra tile model above could represent the product of
- 2 and $(2x + 4)$
 - 2 and $(2x - 4)$
 - 4 and $(-x - 2)$
 - 4 and $(-x + 2)$

Use the following information to answer question 3.

Two students, Robert and Jacob, simplify the expression $3(x^2 + 4x - 1) - (2x + 5)$, as shown below.

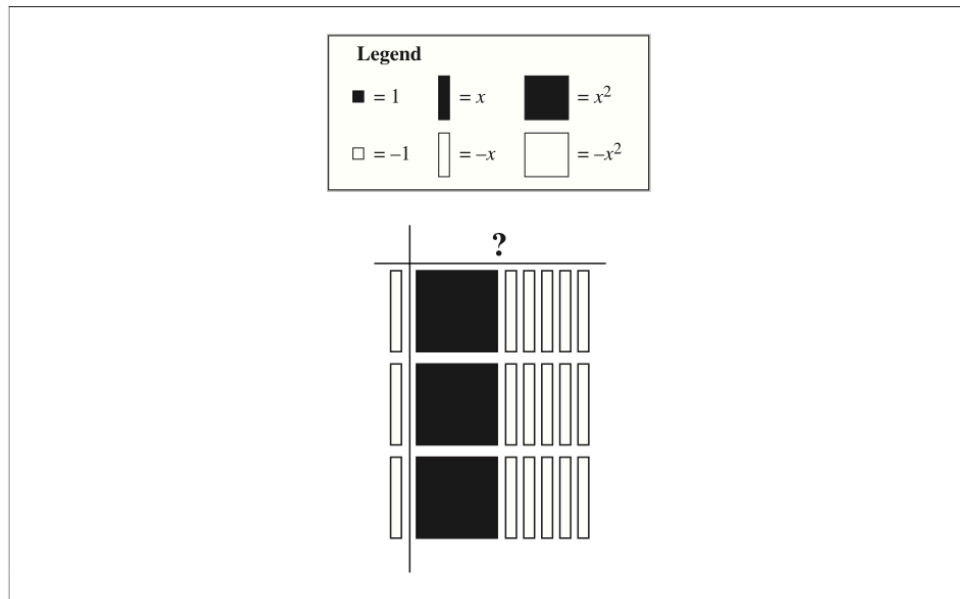
	Robert	Jacob
Step 1	$= 3x^2 + 12x - 3 - (2x + 5)$	$= 3x^2 + 12x - 1 - (2x + 5)$
Step 2	$= 3x^2 + 12x - 3 - 2x + 5$	$= 3x^2 + 12x - 1 - 2x - 5$
Step 3	$= 3x^2 + 10x + 2$	$= 3x^2 + 10x - 6$

3. The **first** error made in the simplification of the expression shown above was made by
- Robert in Step 1
 - Jacob in Step 1
 - Robert in Step 2
 - Jacob in Step 2

Pattern and Relation 7

Name: _____

Use the following information to answer question 39.



39. Which of the following polynomials represents the unknown expression in the model shown above?
- A. $x^2 - 5x$
 - B. $-x^2 + 5x$
 - C. $x - 5$
 - D. $-x + 5$

Numerical Response

9. The quotient of $(-12x^2 - 9x) \div \blacksquare x$ is $-4x - 3$. What is the value of \blacksquare ?

Answer: _____

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

Pattern and Relation 7

Name: _____

Legend

■ = 1	▬ = x	■ = x^2
□ = -1	▬ = $-x$	□ = $-x^2$

The diagram below shows an incomplete model of the multiplication of two polynomials.

24. What is the coefficient on the x -term in the product?

- A. -12
- B. 12
- C. -6
- D. 6

Use the following information to answer question 16.

Four students simplified the expression $\frac{3x(4x-6)}{2(3x)}$. Their answers are shown below.

Student 1

Student 2

Student 3

Student 4

16. Which student correctly simplified the expression?

- A. Student 1
- B. Student 2
- C. Student 3
- D. Student 4

Pattern and Relation 7

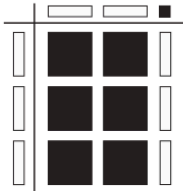
Name: _____

Use the following information to answer question 19.

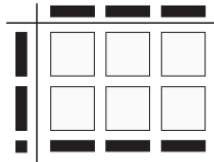
Legend		
■ = 1	▮ = x	■ = x^2
□ = -1	▯ = $-x$	□ = $-x^2$

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

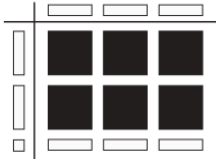
A.



B.



C.



D.

