

Name _____

2-5B

Lesson Master

Questions on SPUR Objectives
See pages 125–127 for objectives.

REPRESENTATIONS

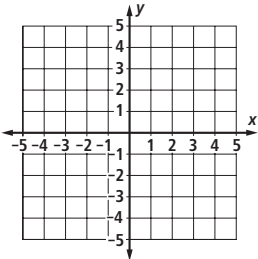
Objective I

In 1–3, consider the expressions $-x^3 - 1$ and $(-x)^3 - 1$.

1. Fill in the table. Do the expressions appear to be equivalent from the table?

x	$-x^3 - 1$	$(-x)^3 - 1$
-2		
-1		
0		
1		
2		

2. Graph each expression. Do they appear to be equivalent?



3. Simplify each expression to show whether or not they are equivalent.

In 4 and 5, consider the expressions $-2(11x + 4) + 13$ and $-4(5x - 1) - (2x + 1)$.

4. Fill in the table. Do the expressions appear to be equivalent from the table?

x	$-2(11x + 4) + 13$	$-4(5x - 1) - (2x + 1)$
-2		
-1		
0		
1		
2		

5. Simplify each expression to show whether or not they are equivalent. If they are not equivalent, give a counterexample to support your claim.

6. Simplify the expressions $2x(2x^2 - x) + 4(x + 1) - x$ and $4(x^3 + 1) - x(2x - 3)$ to show whether or not they are equivalent.

Name

REPRESENTATIONS

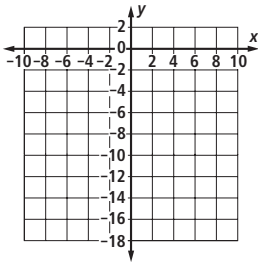
Objectives I and J

In 7-9, consider the expressions $-(2x)^2 - 4$ and $-2x^2 - 4$.

7. Fill in the table. Do the expressions appear to be equivalent from the table?

x	$-(2x)^2 - 4$	$-2x^2 - 4$
-2		
-1		
0		
1		
2		

8. Graph each expression. Do they appear to be equivalent?



9. Simplify each expression to show whether or not they are equivalent.

In 10 and 11, write two equivalent expressions for the perimeter of the given figure. Verify that the two expressions are equivalent by using a table, graph or simplifying each expression.

10. Consider a hexagon with side length $5s + 3$. Assume the hexagon is regular.

11. Consider a rectangular garden plot that has length $6x - 3$ and width $9x + 4$.

12. Simplify the expressions $3x^4(x - 1) - x(-3x^3 - 4) - 3x^5$ and $3x^2(x^3 - 2) + 2x^2 - 3x^5$ to show whether or not they are equivalent.

