Algebraic Reasoning
Name:_____

Per:_____

POINTS:____

Classwork #30 Quiz

Be sure to include your work when appropriate.

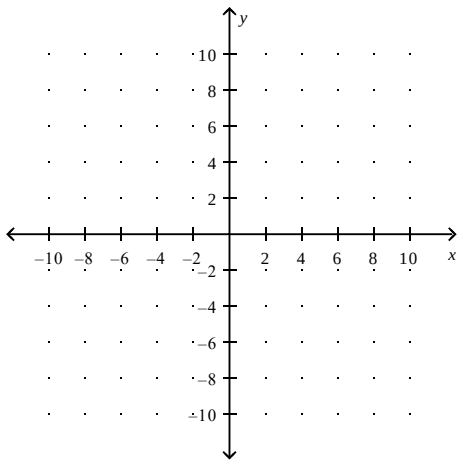
Use the functions to answer the questions.

$$p(x) = 3(x + 1) - 6$$
$$q(x) = -2(x - 3) + 4$$
$$r(x) = p(x) + q(x)$$
$$s(x) = p(x) - q(x)$$

1. Complete the table shown for specific x values for p(x), q(x), r(x), and s(x).

x	$p(x)$	$q(x)$	$r(x)$	$s(x)$
-2				
-1				
0				
1				
2				
3				
4				
5				

2. Sketch a graph of the functions p(x), q(x), r(x) and s(x).



3. Write the equation of the combined function r(x) = p(x) + q(x).

4. Write the equation of the separated function s(x) = p(x) – q(x).

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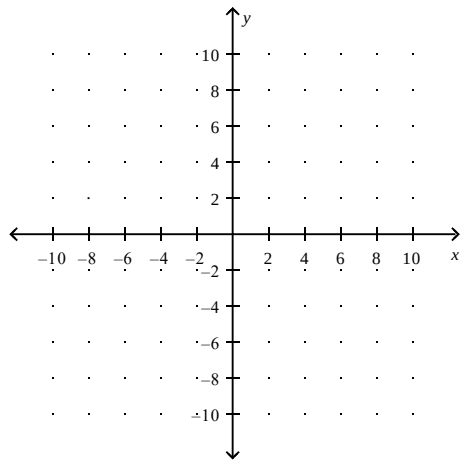


3. Write the equation of the combined function r(x) = p(x) + q(x).

4. Write the equation of the separated function s(x) = p(x) – q(x).

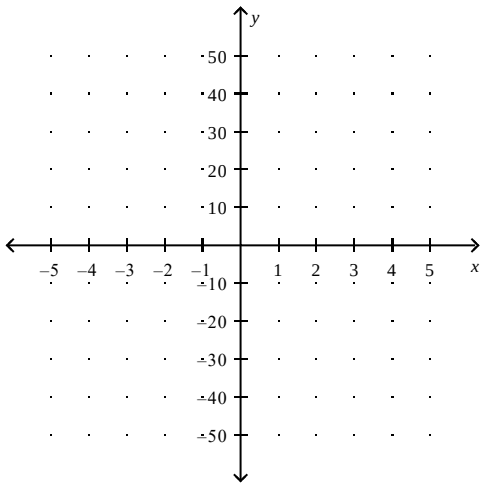
Use the functions to answer the questions.

$$p(x) = 8(0.5x + 1)^3 + 1$$
$$q(x) = -7(x - 3)$$
$$r(x) = p(x) + q(x)$$
$$s(x) = p(x) - q(x)$$

5. Complete the table shown for specific x values for p(x), q(x), r(x), and s(x).

x	p(x)	q(x)	r(x)	s(x)
-1				
0				
1				
2				
3				
4				
5				
6				

6. Sketch a graph of the functions p(x), q(x), r(x) and s(x).



7. Write the equation of the combined function r(x) = p(x) + q(x).

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-1				
0				
1				
2				
3				
4				
5				
6				

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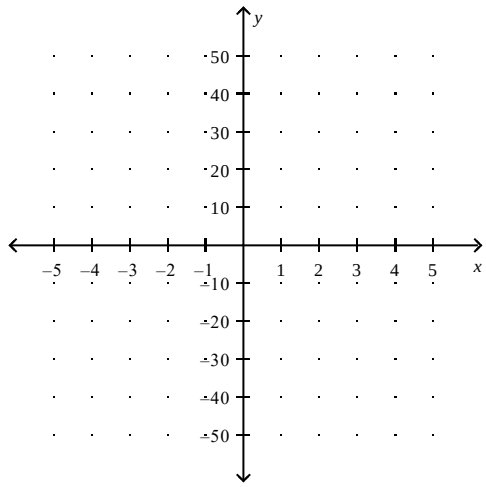

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