Algebraic Reasoning
Name:_____

Per:_____

POINTS:____

Classwork #32 Quiz

Be sure to include your work when appropriate.

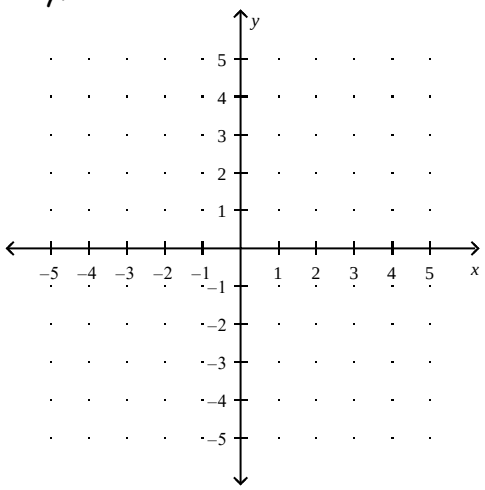
1. Complete the table for missing h(x) values.

x	$f(x) = x^2 - 5x - 14$	$g(x) = x - 7$	$h(x) = f(x) \div g(x)$
0	-14	-7	
1	-18	-6	
2	-20	-5	
3	-20	-4	
4	-18	-3	
5	-14	-2	
6	-8	-1	

2. Use the table for the function $f(x) = 2x^3 - 5x^2 - 3x$ and $g(x) = x$ to find the values for the quotient $h(x) = f(x) \div g(x)$. Then use finite differences to write the function rule for h(x).

x	-6	-5	-4	-3	-2	-1
$f(x) = 2x^3 - 5x^2 - 3x$	-594	-360	-196	-90	-30	-4
$g(x) = x$	-6	-5	-4	-3	-2	-1
$h(x) = f(x) \div g(x)$						

3. Find the quotient w(x) of the quadratic function $u(x) = 6x^2 + 7x - 3$ divided by the linear function $v(x) = 2x + 3$ symbolically and verify the equation graphically.



Algebraic Reasoning
Name:_____

Per:_____

POINTS:____

Classwork #32 Quiz

Be sure to include your work when appropriate.

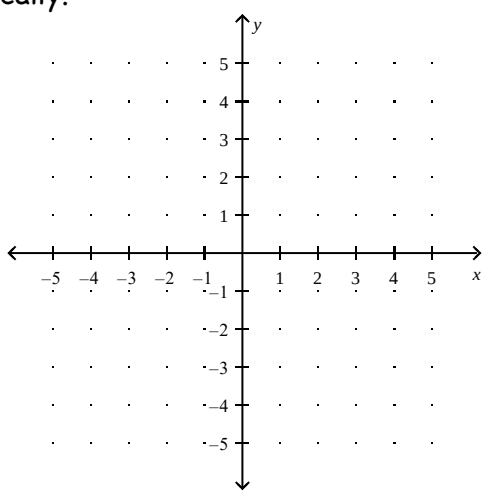
1. Complete the table for missing h(x) values.

x	$f(x) = x^2 - 5x - 14$	$g(x) = x - 7$	$h(x) = f(x) \div g(x)$
0	-14	-7	
1	-18	-6	
2	-20	-5	
3	-20	-4	
4	-18	-3	
5	-14	-2	
6	-8	-1	

2. Use the table for the function $f(x) = 2x^3 - 5x^2 - 3x$ and $g(x) = x$ to find the values for the quotient $h(x) = f(x) \div g(x)$. Then use finite differences to write the function rule for h(x).

x	-6	-5	-4	-3	-2	-1
$f(x) = 2x^3 - 5x^2 - 3x$	-594	-360	-196	-90	-30	-4
$g(x) = x$	-6	-5	-4	-3	-2	-1
$h(x) = f(x) \div g(x)$						

3. Find the quotient w(x) of the quadratic function $u(x) = 6x^2 + 7x - 3$ divided by the linear function $v(x) = 2x + 3$ symbolically and verify the equation graphically.



For questions 4 – 8, determine the quotient $h(x) = f(x) \div g(x)$ for the given functions $f(x)$ and $g(x)$.

4. Find $h(x) = f(x) \div g(x)$ for $f(x) = 3x^2 + 17x + 10$ and $g(x) = x + 5$.

5. Find $h(x) = f(x) \div g(x)$ for $f(x) = 2x - 5$ and $g(x) = 2x^2 + 7x - 30$.

6. Find $h(x) = f(x) \div g(x)$ for $f(x) = 4x^3 - 17x^2 + 15x$ and $g(x) = 4x^2 - 5x$.

7. Find $h(x) = f(x) \div g(x)$ for $f(x) = 6x$ and $g(x) = 8x^2 - 2x$.

8. Find $h(x) = f(x) \div g(x)$ for $f(x) = 6x^3 - 21x^2 - 45x$ and $g(x) = 2x + 3$.

For questions 4 – 8, determine the quotient $h(x) = f(x) \div g(x)$ for the given functions $f(x)$ and $g(x)$.

4. Find $h(x) = f(x) \div g(x)$ for $f(x) = 3x^2 + 17x + 10$ and $g(x) = x + 5$.

5. Find $h(x) = f(x) \div g(x)$ for $f(x) = 2x - 5$ and $g(x) = 2x^2 + 7x - 30$.

6. Find $h(x) = f(x) \div g(x)$ for $f(x) = 4x^3 - 17x^2 + 15x$ and $g(x) = 4x^2 - 5x$.

7. Find $h(x) = f(x) \div g(x)$ for $f(x) = 6x$ and $g(x) = 8x^2 - 2x$.

8. Find $h(x) = f(x) \div g(x)$ for $f(x) = 6x^3 - 21x^2 - 45x$ and $g(x) = 2x + 3$.