Chapter 7B Practice Test – Functions/Inverse Relations

For problems 1 – 9, $f(x) = x^2 - 2x$ and $g(x) = 2x - 4$. Perform the indicated operation, and indicate the domain for problems asking for it. Express all polynomials in standard form.

1. $f(x) + g(x)$

1. _____

   Domain: _____

2. $f(x) - g(x)$

2. _____

   Domain: _____

3. $f(x) \cdot g(x)$

3. _____

   Domain: _____

4. $\dfrac{f(x)}{g(x)}$

4. _____

   Domain: _____

5. $f(g(x))$

5. _____

   Domain: _____

6. $g(f(x))$

6. _____

   Domain: _____

7. $(g \circ f)(-2)$ 7. _____

8. $f(g(2))$ 8. _____

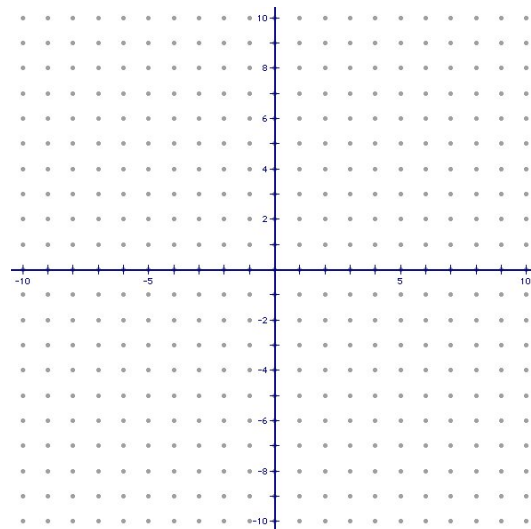9. $g(f(c))$ 9. _____

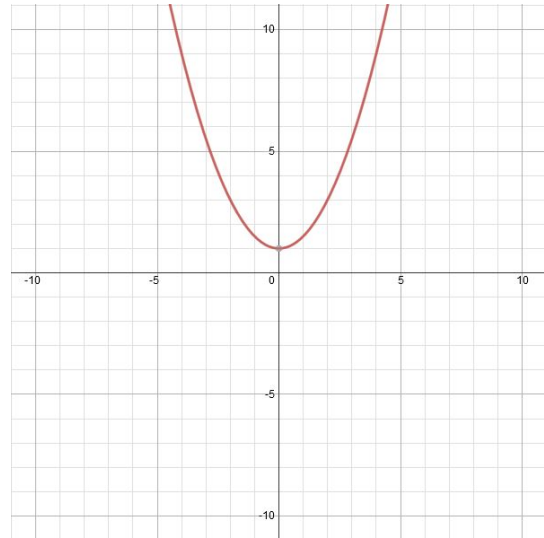10.   a. Find the inverse of $f(x) = x^5 + 2$.   10a. _____

      b. Is the inverse of $f(x)$ a function? Explain. 10b. _____

                                                              _____

                                                              _____

11.   Graph the relation shown below with dots and
      its inverse with squares.

x	1	2	3	4
y	3	5	7	1

Name _____

12.   The graph of $f(x) = 0.5x^2 + 1$ is shown at right.

a. Graph its inverse on the same graph.

b. Is the inverse of $f(x)$ a function? Explain.

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