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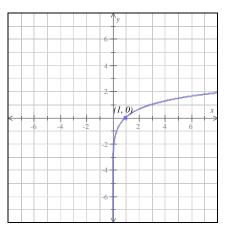
Review Questions

1. Find the first four terms of the sequence given by the following.

$$a_n = \frac{2^n + 1}{3^n}$$
, $n = 1, 2, 3, ...$

2. Below is the graph of $y = \log_3 x$.

Translate it to become the graph of $y = \log_3(x - 3) + 4$.



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3. Solve for y.

$$-\frac{3}{y-2} = -\frac{6}{2y-4} + 1$$

4. Simplify.

$$\frac{\frac{x}{4x-16}}{\frac{x^3}{8x-16}}$$

 $\textbf{5.} \ \ \text{For each equation, choose the statement that describes its solution}.$

If applicable, give the solution.

4/ 11)	$+_{W} = 3(_{W} - 2) + 2$
+(w+1)	+w = 3(w - 2) + 2

- No solution
- $\circ w =$
- All real numbers are solutions

$$2(u-3)-5u=-3(u+3)$$

- No solution
- $\circ u =$
- All real numbers are solutions
- 6. Write the following expression in simplified radical form.

$$\sqrt[4]{48 t^{11} u^8}$$

Assume that all of the variables in the expression represent positive real numbers.

7. Suppose that the relation T is defined as follows.

$$T = \{(-8, -5), (-5, 8), (5, 8)\}$$

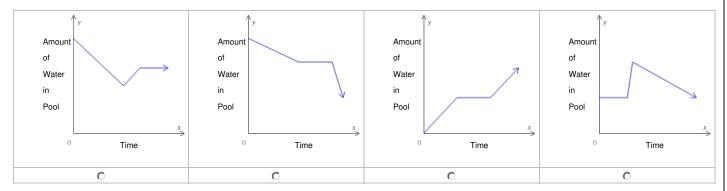
Give the domain and range of T.

Write your answers using set notation.

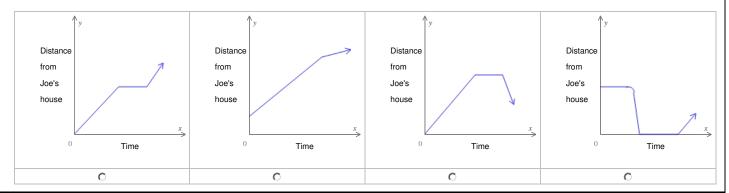
8.

For each scenario below, choose the graph that gives the best representation.

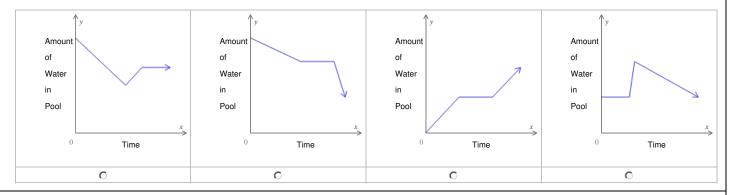
(a) Throughout last month, the Pham family's pool was only half full of water. Three weeks ago, Mrs. Pham filled up the pool with water. Since then, the pool has gone back to half full, due to a slow leak.



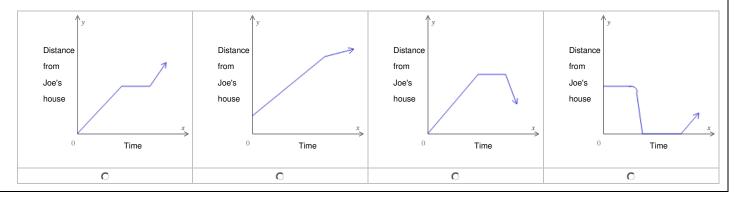
(b) Joe leaves his house on his bike. He rides at a constant speed until he reaches a lemonade stand, where he parks his bike and takes a rest. Then he turns around and bikes home as fast as he can.



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(b) Joe leaves his house on his bike. He rides at a constant speed until he reaches a lemonade stand, where he parks his bike and takes a rest. Then he turns around and bikes home as fast as he can.



9. Simplify.

$$\frac{7r^{5}s^{2}}{10q^{4}}$$

$$\frac{21r^{3}s}{5pq^{3}}$$

10. Solve for x.

$$32^{-x-3} = 64$$