

Name: _____

Class Period: _____

SM3

Worksheet 1.A Graphing Square and Cube Roots

Directions (#1-4): Match each function with the correct graph.

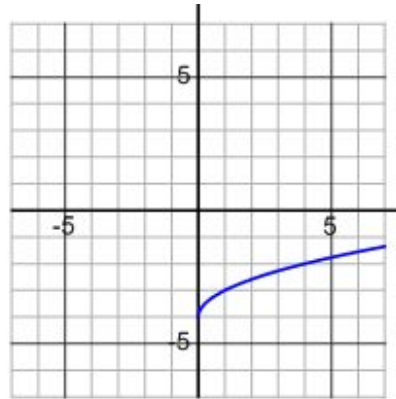
1. $y = \sqrt{x+4}$

2. $y = \sqrt{x} - 4$

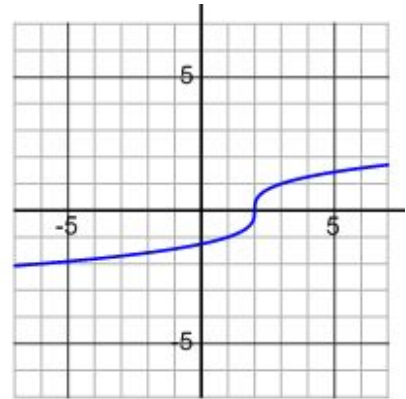
3. $y = \sqrt[3]{x-2}$

4. $y = \sqrt[3]{x} + 2$

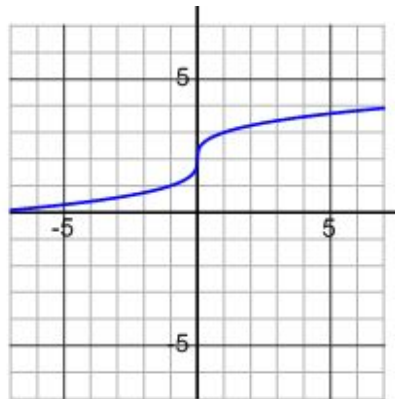
A.



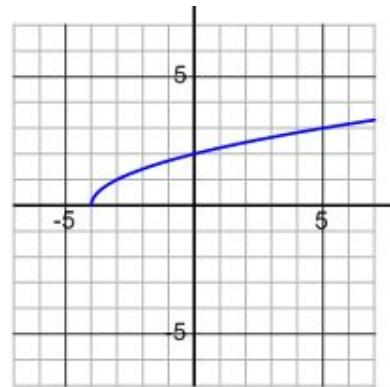
B.



C.

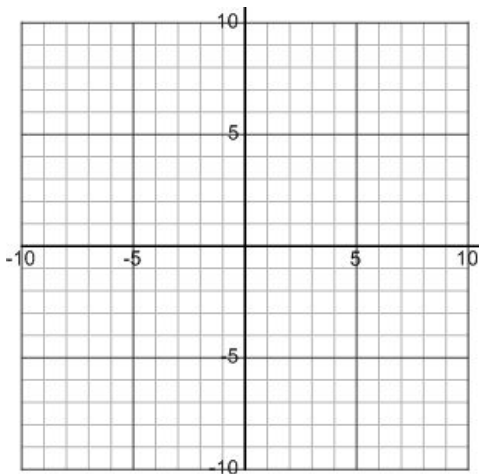


D.

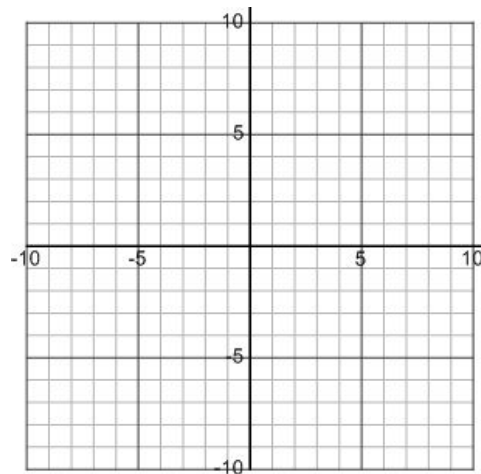


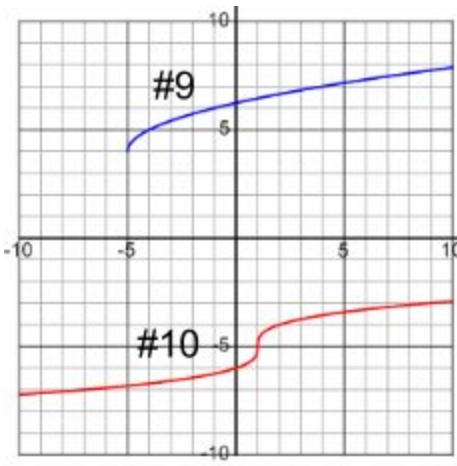
Directions (#5-8): For each function, describe the transformation from its parent function. Then, sketch a graph.

5. If $f(x) = \sqrt[3]{x}$, then graph $f(x-3) - 1$
Transformations:



6. If $f(x) = \sqrt{x}$, the graph $f(x+5)$
Transformations:



7. What are the domain, range, and end behavior of $y = \sqrt{x+2} - 3$? Domain: Range: End Behavior: As $x \rightarrow -\infty$, $y \rightarrow$ _____ As $x \rightarrow \infty$, $y \rightarrow$ _____	8. Solve for x: $\frac{xy+z}{y^2} = y$
What are the equations of the graphs to the right? 9. 10.	

Directions (#11–15): Simplify each expression using rules of exponents.

11. a) $x^3 \cdot x^5$ b) $2x^2 \cdot 3y^4 \cdot x^{10} \cdot y^6$	12.a) $(y^8)^{\frac{1}{2}}$ b) $(25x^6y^2)^{1/2}$
13. a) $3 \cdot x^0 \cdot y^2 \cdot x^8 \cdot y$ b) $-(7x^2y^7)^0$	14. Solve for w: $R = \frac{l+3w}{2}$
15. $x^{\frac{2}{3}} \cdot x^{\frac{4}{3}}$	

