For problems 10 – 14, given the parent function and a description of the transformation, write the equation of the transformed function, f(x).

10. Absolute value—vertical shift down 5, horizontal shift right 3. _____

11. cubic vertical shift up 5. _____

12. Square Root —vertical shift down 2, horizontal shift left 7. _____

13. Quadratic— horizontal shift left 8. _____

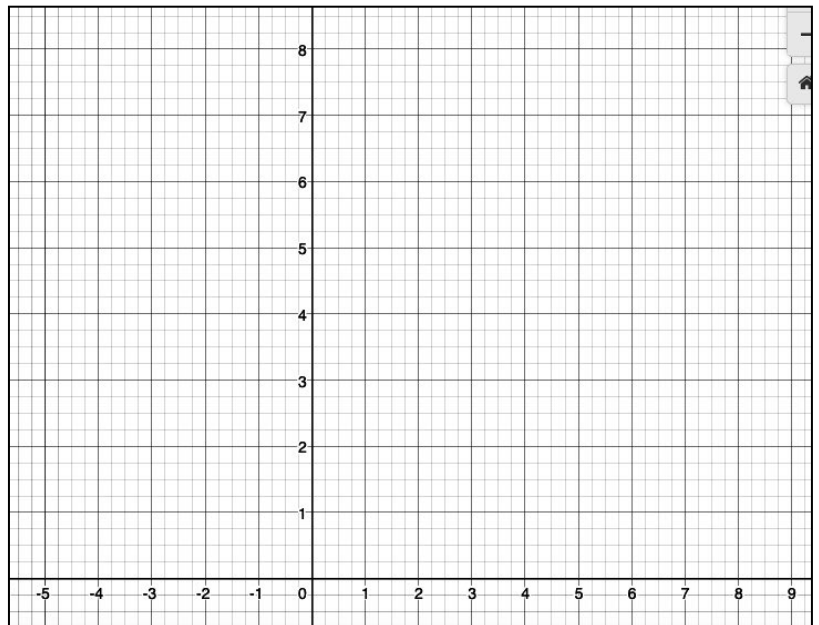14. cube root-vertex at (-5, -2). _____

For the problems below, state what parent function it is built from, state transformations that are taking place, sketch each step in **different colors** and check your final solutions on a graphing calculator.

$$f(x)=\sqrt{-2x}+4$$

Parent Function:

Parent with multiplier and what it means:

Parent with multiplier and shifts and what it means:

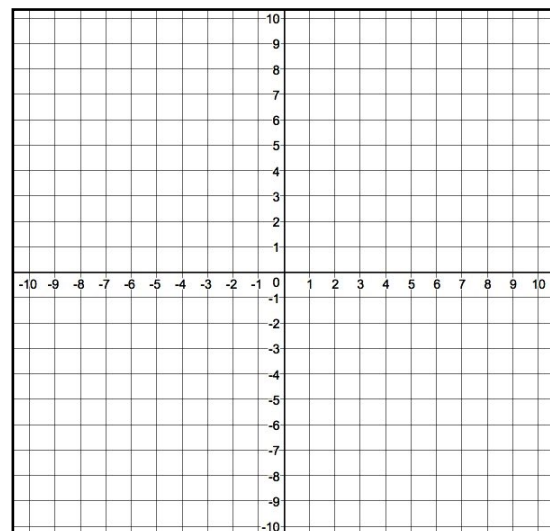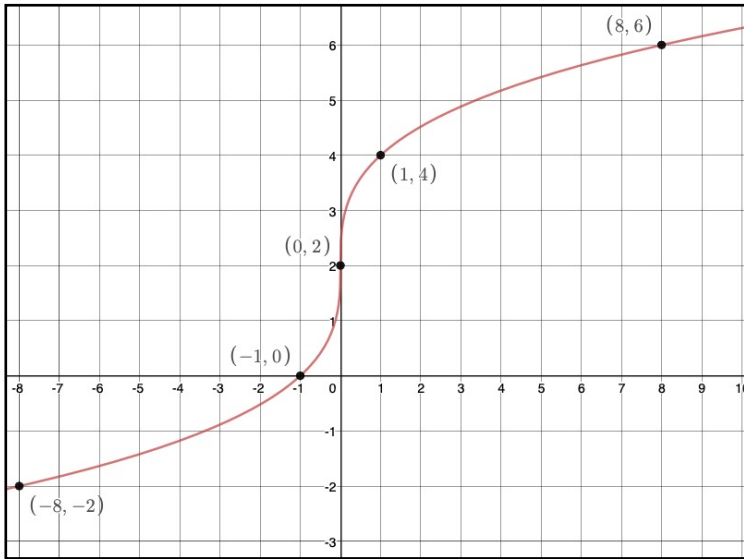
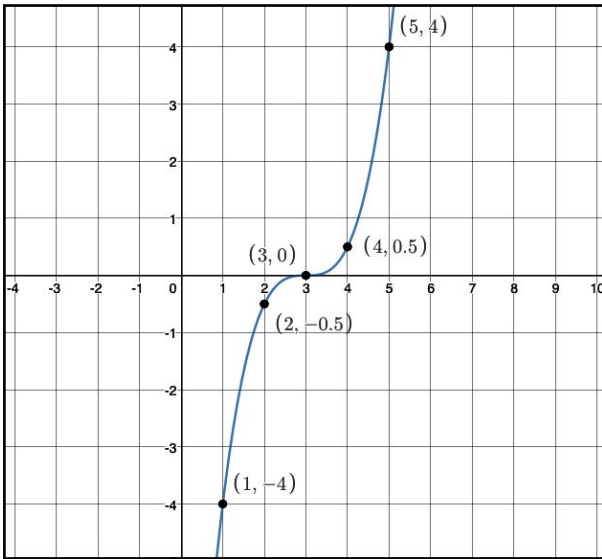$$f(x)=-\left|\frac{1}{3}x\right|-4$$

Parent Function:

Parent with multiplier and what it means:

Parent with multiplier and shifts and what it means:

Parent Function:

Parent with multiplier and what it means:

Parent with multiplier and shifts and what it means:

Parent Function:

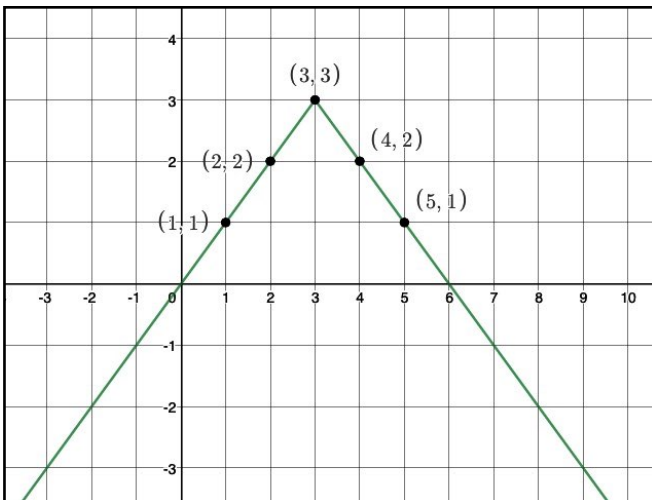Parent with multiplier and what it means:

Parent with multiplier and shifts and what it means:

Parent Function:

Parent with multiplier and what it means:

Parent with multiplier and shifts and what it means: