

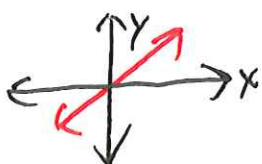
Families of Functions Practice

For exercises #1-16, use what you know about functions to...

- Sketch a picture of what you think each equation would look like if it were graphed. Will it be a line, a parabola, a hyperbola, a v-shaped graph...?
- Name what family each equation belongs to.

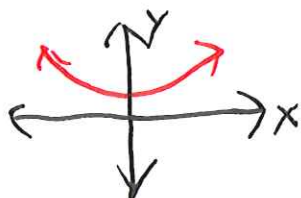
1. $y = 2x$

Linear



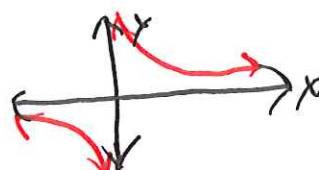
2. $x^2 + 2$

Quadratic



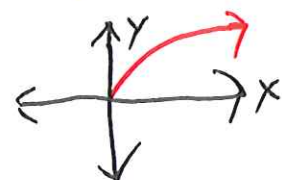
3. $y = \frac{2}{x}$

Rational



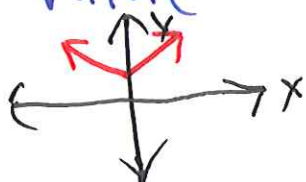
4. $y = \sqrt{x}$

Root



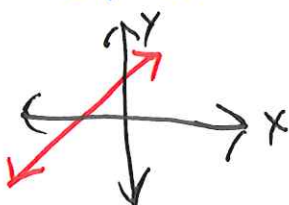
5. $y = |x| + 2$

Absolute Value



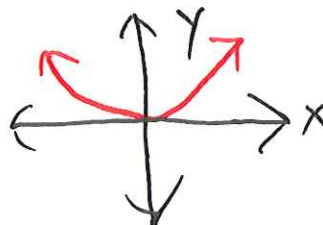
6. $y = x + 6$

Linear



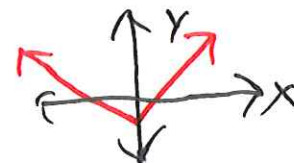
7. $y = 2x^2$

Quadratic



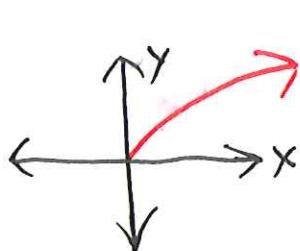
8. $y = |x| - 2$

Absolute Value



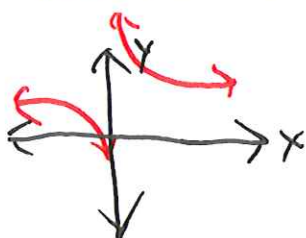
9. $y = 5\sqrt{x}$

Root



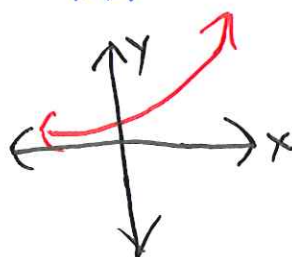
10. $y = \frac{1}{x} + 2$

Rational



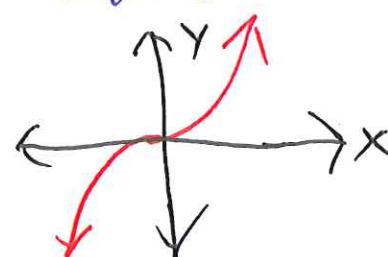
11. $y = 10^x$

Exponential



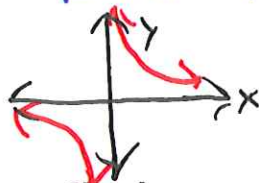
12. $y = 2x^3 + 6$

Cubic



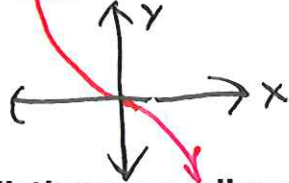
13. $y = \frac{6}{x}$

Rational



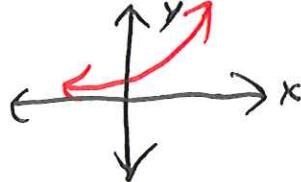
14. $-x^3 + 2$

Cubic



15. $y = 5^x$

Exponential



16. $3x - 8$

Linear

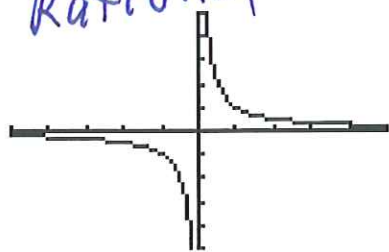


Check your predictions regarding what each graph looks like using a graphing calculator, then fix any mistakes.

For #17–30 , write the name of the family of functions to which each graph belongs.

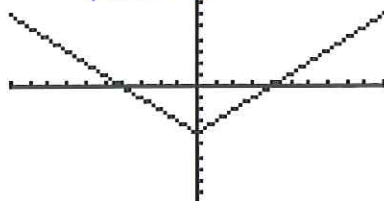
17.

Rational



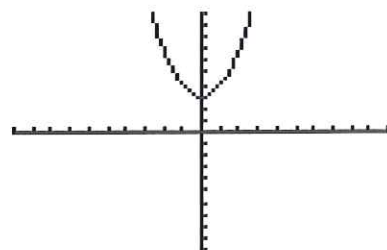
18.

Absolute Value



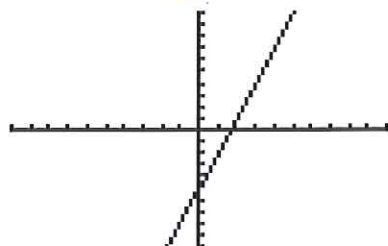
19.

Quadratic



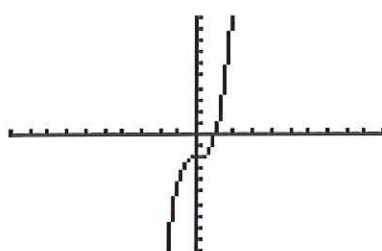
20.

Linear



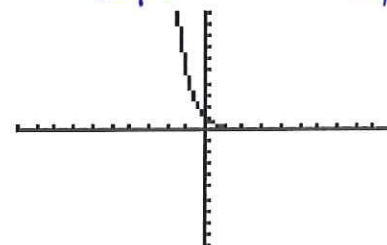
21.

Cubic



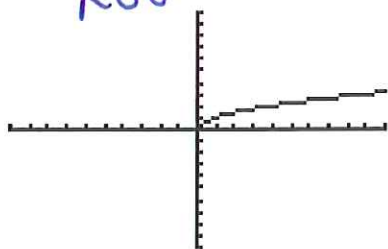
22.

Exponential



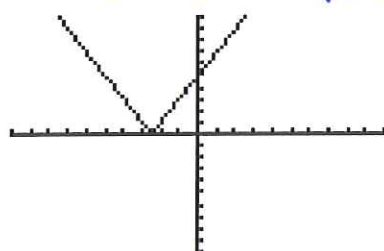
23.

Root



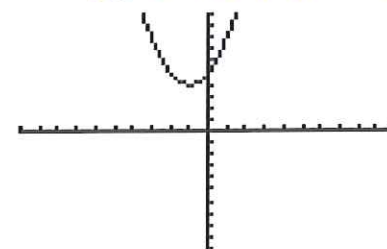
24.

Absolute Value



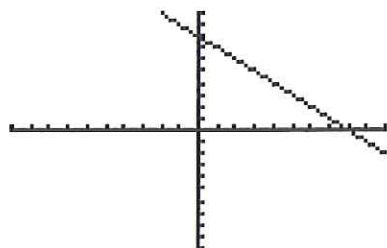
25.

Quadratic



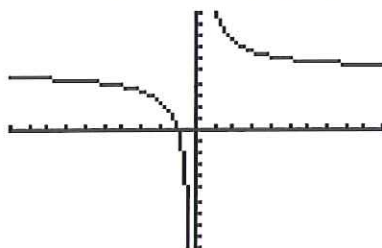
26.

Linear



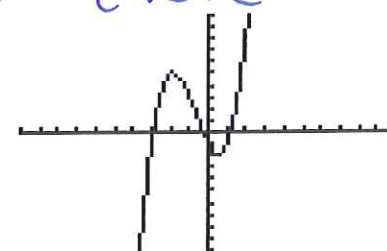
27.

Rational



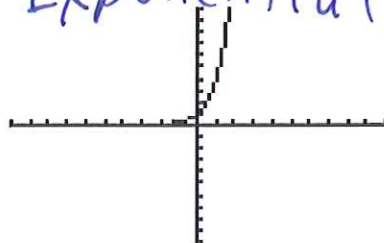
28.

Cubic



29.

Exponential



30.

Root

