

Bell Work: 3-5

N-RN.2.3

Given: $L = \sqrt{2}$ — irrational
 $M = 3\sqrt{3}$ — irrational
 $N = \sqrt{16} = 4$
 $P = \sqrt{9} = 3$

Which expression results in a rational number?

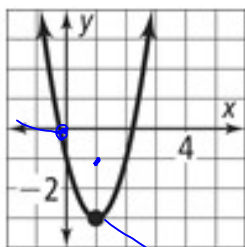
- A. $L + M$
- B. $M + N$
- ☒ C. $N + P$
- D. $P + L$

Quadratic Graphs and Their Properties

Identify the vertex of each graph. Tell whether it is a minimum or a maximum.

(x, y)
lowest or highest point

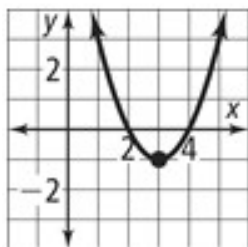
1)
 $(0, 0)$



vertex
 $(1, -3)$

minimum

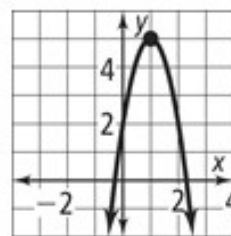
2)



vertex
 $(3, -1)$

minimum

3)



vertex
 $1, 5$

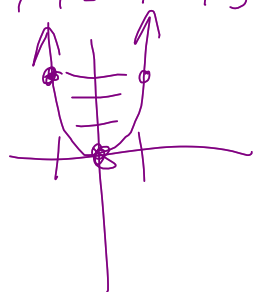
maximum

Graph each function.

$$y = 3x^2$$

4) $f(x) = 3x^2$

| | | | |
|---|----|---|---|
| x | -1 | 0 | 1 |
| y | 3 | 0 | 3 |



if fraction is before x^2 ,
use multiples of the
denominator for x

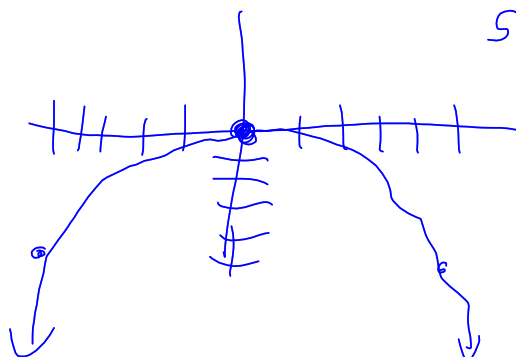
5) $f(x) = -\frac{1}{5}x^2$

| | | | |
|---|----|---|----|
| x | -5 | 0 | 5 |
| y | -5 | 0 | -5 |

$$-\frac{1}{5}(-5)^2$$

$$-\frac{1}{5}(25)$$

$$\frac{1}{5}(5)^2$$



if no fraction before x^2 , use $-1, 0, 1$ for x

Order each group of quadratic functions from widest to narrowest graph.

6) $y = -3x^2, y = -5x^2, y = -1x^2$
 $- y = 3x^2, y = 5x^2, y = 1x^2$
 $- y = 1x^2, 3x^2, 5x^2$
 $- y = -1x^2, -3x^2, -5x^2$

7) $y = 4x^2, y = -2x^2, y = -6x^2$
 $y = 4x^2, 2x^2, 6x^2$
 $y = 2x^2, 4x^2, 6x^2$
 $y = -2x^2, 4x^2, -6x^2$

8) $y = x^2, y = \frac{1}{3}x^2, y = 2x^2$
 $y = \frac{1}{3}x^2, x^2, 2x^2$

9) $y = \frac{1}{6}x^2, y = \frac{1}{4}x^2, y = \frac{1}{2}x^2$
 $y = \frac{1}{6}x^2, \frac{1}{4}x^2, \frac{1}{2}x^2$