

11-1 Enrichment

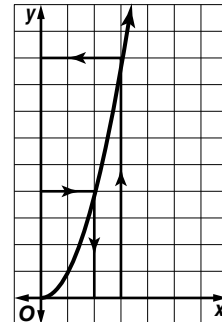
Squares and Square Roots From a Graph

The graph of $y = x^2$ can be used to find the squares and square roots of numbers.

To find the square of 3, locate 3 on the x -axis. Then find its corresponding value on the y -axis.

The arrows show that $3^2 = 9$.

To find the square root of 4, first locate 4 on the y -axis. Then find its corresponding value on the x -axis. Following the arrows on the graph, you can see that $\sqrt{4} = 2$.

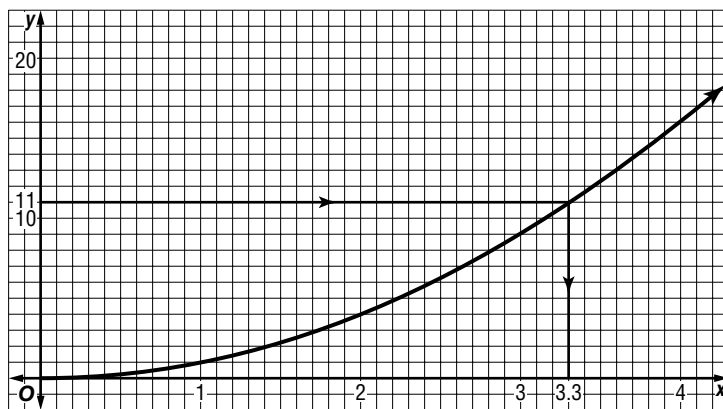


A small part of the graph at $y = x^2$ is shown below. A 1:10 ratio for unit length on the y -axis to unit length on the x -axis is used.

Example

Find $\sqrt{11}$.

The arrows show that $\sqrt{11} = 3.3$ to the nearest tenth.



Use the graph above to find each of the following to the nearest whole number.

1. 1.5^2

2. 2.7^2

3. 0.9^2

4. 3.6^2

5. 4.2^2

6. 3.9^2

Use the graph above to find each of the following to the nearest tenth.

7. $\sqrt{15}$

8. $\sqrt{8}$

9. $\sqrt{3}$

10. $\sqrt{5}$

11. $\sqrt{14}$

12. $\sqrt{17}$