

y Intercepts

When graphing a function, we are often interested in certain key areas of a graph. One of these areas is knowing where the graph intersects the y axis. It's often convenient to be able to determine where this occurs without having to graph the function. That is, by looking directly at the polynomial.

To determine the y intercepts, we set $x = 0$, because any point intersecting the y axis will be of the form $(0, y)$ for some y .

Example:

Find the y intercepts for $f(x) = x^2 + 9x + 5$

$f(0) = 5$, so the y intercept is $(0, 5)$

Try finding the y intercepts of these on your own:

1. $x - y = 2$

2. $x - 4y = 2$

3. $3x^3 - y + 4 = 4$

4. $xy = y + 3$

5. $3x + 2y = 20$

6. $x^2y + y^2x - xy + y = 31$

7. $x^2 + 2x + y^2 - 2y + 1 = 0$

8. $x^2 - x^2 y^2 + y^2 = 25$

9. $x^2 + y^2 = 9$

10. $\sqrt{x^2 + y^2} = 100$

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