

E Michaelmas Quadratic Sketching 1

Remember: If you want to know where *anything* crosses the y -axis, put $x = 0$ and solve.

If you want to know where *anything* crosses the x -axis, put $y = 0$ and solve.

Whether a quadratic is 'happy' or 'sad' is determined by whether the x^2 coefficient is positive or negative.

Sketch the following quadratics, remembering to discover (and mark) where they cross the x and y axes.

1. $y = x^2 + 3x - 10.$

2. $y = -x^2 + 6x - 8.$

3. $y = 3x^2 + x - 4.$

4. $y = 4x^2 + 4x - 15.$

5. $y = -2x^2 + 13x + 15.$

6. $y = 2x^2 + 8x - 42.$

7. $y = -4x^2 + 10x + 6.$

8. $y = 5x^2 - 20x + 15.$

9. $y = -6x^2 + 6x + 36.$

10. $y = 30x^2 - 75x + 45.$