

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