

## Quadratic Colouring In

Draw axes with  $-14 \leq x \leq 14$  and  $-9 \leq y \leq 9$  using 1cm per unit. Plot the following quadratics all on the same axes.

1.  $y = -0.05x^2 - 4$
2.  $y = 0.1x^2 - 14$
3.  $y = 0.25x^2 - 4.4x + 16$
4.  $y = 0.25x^2 + 4.4x + 16$
5.  $y = 0.3x^2 - 2.7x + 5$
6.  $y = 0.3x^2 + 2.7x + 5$

Now colour in the region in the middle.

To complete the shape, plot the following lines and colour in the obvious regions.

1.  $y = -10x - 14$
2.  $y = 10x - 14$
3.  $y = -5x - 3$
4.  $y = 5x - 3$
5.  $y = -5.5$