## Completing the Square

## $ڭ_{\text {REVISE THIS }}$ TOPIC

## CHECK YOUR ANSWERS

1 Write $x^{2}+6 x+11$ in the form $(x+a)^{2}+b$

2 Write $x^{2}+8 x+30$ in the form $(x+a)^{2}+b$

3 Write $x^{2}+4 x+1$ in the form $(x+a)^{2}-b$

4 Write $x^{2}-10 x+12$ in the form $(x-a)^{2}-b$

5 Write $x^{2}-2 x+13$ in the form $(x-a)^{2}+b$

6 Write $x^{2}-12 x-16$ in the form $(x-a)^{2}+b$

7 Write $x^{2}-20 x$ in the form $(x-a)^{2}-b$

8 Write $x^{2}+3 x+5$ in the form $(x+a)^{2}+b$

9 Write $x^{2}-5 x+7$ in the form $(x-a)^{2}+b$

10 Write $x^{2}+9 x+3$ in the form $(x+a)^{2}-b$

11 Write $x^{2}-x-2.75$ in the form $(x-a)^{2}-b$

12 Here is an identity
$x^{2}+p x+32 \equiv(x+5)^{2}-q$
Work out the values of $p$ and $q$.

$$
p=.
$$

$\qquad$

$$
q=.
$$

$\qquad$

13 Here is an identity

$$
x^{2}-8 x+p \equiv(x+q)^{2}-4
$$

Work out the values of $p$ and $q$.

$$
p=.
$$

$\qquad$
$\qquad$

$$
q=.
$$

