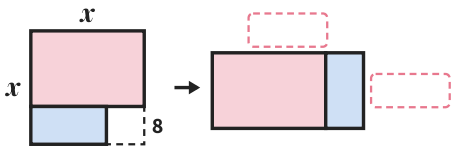
# The difference of two squares

**1**

Factorise $x^2 - 64$

turn the blue piece and stand it on the right




square root each term

√ of $x^2$ is ☐ √ of 64 is ☐

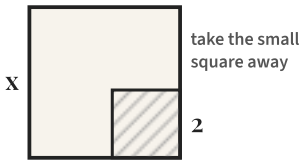
one bracket with +, one with −

(☐ + ☐)(☐ − ☐)

**Answer** _____

**2**

Factorise $x^2 - 4$




square root each term

√ of $x^2$ is $x$ √ of 4 is ☐

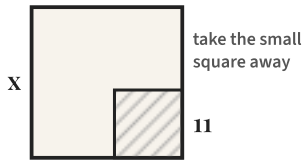
one bracket with +, one with −

(☐ + ☐)(☐ − ☐)

**Answer** _____

**3**

Factorise $x^2 - 121$




square root each term

√ of $x^2$ is ☐ √ of 121 is ☐

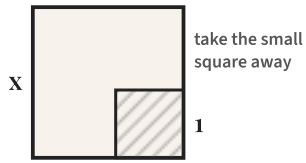
one bracket with +, one with −

(☐ + ☐)(☐ − ☐)

**Answer** _____

**4**

Factorise $x^2 - 1$




square root each term

√ of $x^2$ is ☐ √ of 1 is ☐

one bracket with +, one with −

(☐ + ☐)(☐ − ☐)

**Answer** _____

**5**

Factorise $9x^2 - 4$

√ of $9x^2$ is ☐ √ of 4 is ☐

(☐ + ☐)(☐ − ☐)

**Answer** _____

**6**

Factorise $25x^2 - 49$

**Answer** _____

**7**

Tom writes

$x^2 - 100 = (x - 10)(x - 10)$

Expand his brackets to show he is wrong.

Then factorise $x^2 - 100$ correctly.

**Answer** _____

**8**

Work out $82^2 - 18^2$ without a calculator.

**Answer** _____

# The difference of two squares *further practice*

**9**

Factorise $49x^2 - 1$

Answer _____

**10**

Which of these are the difference of two squares? Circle them, then factorise each one you circle.

$x^2 - 36$ $x^2 + 49$

$x^2 - 18$ $4x^2 - 81$

Answer _____

**11**

Find the missing terms.

$16x^2 - \square = (4x + 3)(\square - 3)$

Answer _____

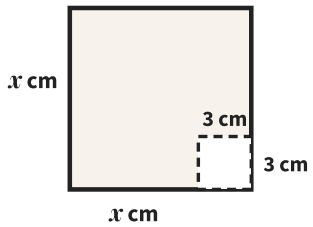
**12**

Work out $205^2 - 195^2$ without a calculator.

Answer _____

**13**

A square tile has sides of $x$ cm.
A square with sides of 3 cm is cut from one corner. Write the area that is left as two brackets multiplied.




Answer _____

**14**

Ama says $(x - 8)^2 = x^2 - 64$.
Is she right? Explain.

Answer _____

**15**

Work out $47 \times 53$ without a calculator. Use $47 = 50 - 3$ and $53 = 50 + 3$.

Answer _____

**16**

Sami says
$x^2 - 50 = (x + 25)(x - 25)$.
Explain his mistake.

Answer _____