Timester Challenge

Factorising Quadratic Expressions

Factorise

1) $x^2 + 8x + 12$

2) $x^2 - 11x + 18$

Bronze

Factorise the following expressions fully.

1) $x^2 - 25$

2) $4x^2 - 9$

Silver

Factorise $2x^2 + 13x + 21$

Gold

Factorise

1) $x^2 - 2x - 15$

2) $x^2 + 3x - 28$

Bronze

Circle the equation with the roots -3 *and* 5.

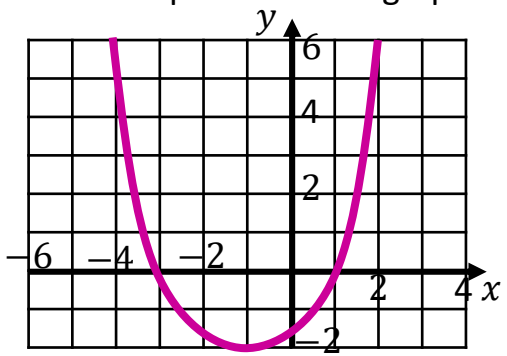
Circle the correct answer

$(x - 3)(x + 5) = 0$ $\quad$ $5x(x - 3) = 0$

$x^2 - 15 = 0$ $\quad$ $(x + 3)(x - 5) = 0$

Silver

Find the equation of the graph.



Gold

Timester Challenge

Factorising Quadratic Expressions

Answers

Factorise

1) $x^2 + 8x + 12$

$(x + 2)(x + 6)$

2) $x^2 - 11x + 18$

$(x - 9)(x - 2)$

Bronze

Factorise the following expressions fully.

1) $x^2 - 25$

$(x + 5)(x - 5)$

2) $4x^2 - 9$

$(2x + 3)(2x - 3)$

Silver

Factorise $2x^2 + 13x + 21$

$(2x + 7)(x + 3)$

Gold

Factorise

1) $x^2 - 2x - 15$

$(x - 5)(x + 3)$

2) $x^2 + 3x - 28$

$(x + 7)(x - 4)$

Bronze

Circle the equation with the roots -3 *and* 5.

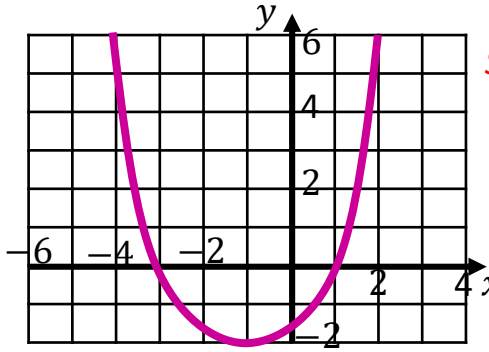
Circle the correct answer

$(x - 3)(x + 5) = 0$ $\quad$ $5x(x - 3) = 0$

$x^2 - 15 = 0$ $\quad$ $(x + 3)(x - 5) = 0$

Silver

Find the equation of the graph.



Roots are $x = -3$ *and* $x = 1$

So

$(x + 3)(x - 1) = 0$

$x^2 + 2x - 3 = 0$

Hence

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

Gold