

Outcome 3 - Trinomials

Bronze examples...

Examples... 2 4

1. Two brackets

$$x^2 + 6x + 8 = (x + 2)(x + 4)$$

2. Put letters at the start of each bracket

$$y^2 + 16y + 63 = (y + 7)(y + 9)$$

3. 2 numbers which...
× number at end
+ number in middle

$$m^2 + 10m + 24 = (m + 4)(m + 6)$$

Silver examples

Examples... 2 4

1. Two brackets

$$x^2 - 2x - 8 = (x + 2)(x - 4)$$

2. Put letters at the start of each bracket

$$y^2 + y - 56 = (y - 7)(y + 8)$$

3. 2 numbers which...
× number at end
+ number in middle

$$m^2 - 11m + 18 = (m - 2)(m - 9)$$

Gold examples

Examples...

$$2x^2 + 17x + 30 = (2x + 5)(x + 6)$$

12x 5x

2x	+5	6	3x	-2	3
x	+6	5	x	+3	2

9x 2x

$$3x^2 + 7x - 6 = (3x - 2)(x + 3)$$

Bronze Questions

Factorise the following expressions...

1 $x^2 + 4x + 3$ 2 $y^2 + 7y + 12$

3 $c^2 + 7c + 10$ 4 $t^2 + 11t + 24$

5 $g^2 + 14g + 49$ 6 $q^2 + 14q + 45$

7 $w^2 + 16w + 60$ 8 $p^2 + 13p + 36$

9 $n^2 + 14n + 48$ 10 $r^2 + 13r + 30$

Silver Questions

Factorise the following expressions...

1 $x^2 + 3x - 4$ 2 $y^2 + y - 12$

3 $c^2 + 3c - 10$ 4 $t^2 + 4t - 21$

5 $g^2 - 8g + 16$ 6 $q^2 - 3q + 28$

7 $w^2 - 18w + 80$ 8 $p^2 - 5p - 14$

9 $n^2 - 9n + 20$ 10 $r^2 + 6r - 27$

Gold Questions

Factorise the following expressions...

1 $2x^2 + 13x + 15$

2 $2y^2 + 23y + 11$

3 $3c^2 + 2c - 5$

4 $7t^2 + 4t - 3$

5 $5g^2 - 7g - 6$

6 $10q^2 - 17q + 3$

Bronze Answers

1. $(x + 1)(x + 3)$
2. $(y + 3)(y + 4)$
3. $(c + 5)(c + 2)$
4. $(t + 8)(t + 3)$
5. $(g + 7)(g + 7)$
6. $(q + 5)(q + 9)$
7. $(w + 6)(w + 10)$
8. $(p + 4)(p + 9)$
9. $(n + 8)(n + 6)$
10. $(r + 3)(r + 10)$

Silver Answers

1. $(x - 1)(x + 4)$
2. $(y - 3)(y + 4)$
3. $(c + 5)(c - 2)$
4. $(t + 7)(t - 3)$
5. $(g - 4)(g - 4)$
6. $(q - 7)(q + 4)$
7. $(w - 8)(w - 10)$
8. $(p - 7)(p + 2)$
9. $(n - 5)(n - 4)$
10. $(r - 3)(r + 9)$

Gold Answers

1. $(2x + 3)(x + 5)$
2. $(2y + 1)(y + 11)$
3. $(3c + 5)(c - 1)$
4. $(7t - 3)(t + 1)$
5. $(5g + 3)(g - 2)$
6. $(5q - 1)(2q - 3)$