

Outcome 3 - Trinomials

Bronze examples...

Examples... 2 4 1. Two brackets

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

7 9 2. Put letters at the start of each bracket

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

4 6 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

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

7 8 2. Put letters at the start of each bracket

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

3 6 2 9 3. 2 numbers which... × number at end + number in middle

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

Gold examples

Examples... $2x^2 + 17x + 30$

$$12x \quad 5x \quad = (2x + 5)(x + 6)$$

2x	+5	6
x	+6	5

3x	-2	3
x	+3	2

$9x \quad 2x \quad 3x^2 + 7x - 6 = (3x - 2)(x + 3)$

Bronze Questions

Factorise the following expressions...

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

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

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

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

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

Silver Questions

Factorise the following expressions...

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

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

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

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

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

Gold Questions

Factorise the following expressions...

 $2x^2 + 13x + 15$

 $2y^2 + 23y + 11$

 $3c^2 + 2c - 5$

 $7t^2 + 4t - 3$

 $5g^2 - 7g - 6$

 $10q^2 - 17q + 3$

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. $(5q - 1)(2q - 3)$ |