

Outcome 2 - Difference of 2 Squares

Bronze examples...

Examples...

- 1. Two brackets
- 3. Square root both terms
- 2. 'u' and a 'v'

$$c^2 - d^2 = (c + d)(c - d)$$

$$x^2 - 16 = (x + 4)(x - 4)$$

$$y^2 - 64 = (y + 8)(y - 8)$$



Silver examples

Examples...

- 1. Two brackets
- 3. Square root both terms
- 2. 'u'

$$9a^2 - 16b^2 = (3a + 4b)(3a - 4b)$$

$$25x^2 - 36y^2 = (5x + 6y)(5x - 6y)$$

$$49x^2 - 64y^2 = (7x + 8y)(7x - 8y)$$



Gold examples

Examples...

1. Common Factor first!

2. Then diff of 2 squares!

$$3x^2 - 48$$

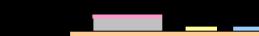
$$= 3(x^2 - 16)$$

$$= 3(x + 4)(x - 4)$$

$$2y^2 - 50$$

$$= 2(y^2 - 25)$$

$$= 2(y + 5)(y - 5)$$



Bronze Questions

Factorise the following expressions...



$$\text{1 } r^2 - s^2$$

$$\text{2 } m^2 - n^2$$

$$\text{3 } x^2 - 36$$

$$\text{4 } c^2 - 49$$

$$\text{5 } z^2 - 4$$

$$\text{6 } w^2 - 100$$

$$\text{7 } a^2 - 9$$

$$\text{8 } p^2 - 144$$

$$\text{9 } b^2 - 25$$

$$\text{10 } r^2 - 10\,000$$

Silver Questions

Factorise the following expressions...



$$\text{1 } 4x^2 - 25y^2$$

$$\text{2 } 64p^2 - 9q^2$$

$$\text{3 } 121a^2 - 16b^2$$

$$\text{4 } 16s^2 - 9t^2$$

$$\text{5 } 49g^2 - 100h^2$$

$$\text{6 } 36k^2 - 25n^2$$

$$\text{7 } 9r^2 - 169y^2$$

$$\text{8 } q^2 - 900w^2$$

$$\text{9 } 400z^2 - y^2$$

$$\text{10 } 4i^2 - 625j^2$$

Gold Questions

Factorise the following expressions...



$$\text{1 } 2p^2 - 128$$

$$\text{2 } 5w^2 - 245$$

$$\text{3 } 7m^2 - 28$$

$$\text{4 } 2c^2 - 162$$

$$\text{5 } 3z^2 - 363$$

$$\text{6 } 2w^2 - 200$$

$$\text{7 } 2a^2 - 288$$

$$\text{8 } 11p^2 - 176$$

$$\text{9 } 2b^2 - 1800$$

$$\text{10 } 7r^2 - 252$$

Bronze Answers

1. $(r + s)(r - s)$
2. $(m + n)(m - n)$
3. $(x + 6)(x - 6)$
4. $(c + 7)(c - 7)$
5. $(z + 4)(z - 4)$
6. $(w + 10)(w - 10)$
7. $(a + 3)(a - 3)$
8. $(p + 12)(p - 12)$
9. $(b + 5)(b - 5)$
10. $(r + 100)(r - 100)$

Silver Answers

1. $(2x + 5y)(2x - 5y)$
2. $(8p + 3q)(8p - 3q)$
3. $(11a + 4b)(11a - 4b)$
4. $(4s + 3t)(4s - 3t)$
5. $(7g + 10h)(7g - 10h)$
6. $(6k + 5n)(6k - 5n)$
7. $(3r + 13y)(3r - 13y)$
8. $(q + 30w)(q - 30w)$
9. $(20z + y)(20z - y)$
10. $(2i + 25j)(2i - 25j)$

Gold Answers

1. $2(p + 8)(p - 8)$
2. $5(w + 7)(w - 7)$
3. $7(m + 2)(m - 2)$
4. $2(c + 9)(c - 9)$
5. $3(z + 11)(z - 11)$
6. $2(w + 10)(w - 10)$
7. $2(a + 12)(a - 12)$
8. $11(p + 4)(p - 4)$
9. $2(b + 30)(b - 30)$
10. $7(r + 6)(r - 6)$