Factorising Algebraic Expressions

1)

Factorise **fully**

$$2x^2 - 18.$$ **2**

2)

Factorise

$$x^2 - 5x - 24.$$ **2**

3)

Factorise

$$x^2 + x - 6.$$ **2**

4)

Factorise $x^2 - 4x - 21$.   **2**

5)

(*a*) Factorise

$$x^2 - y^2.$$ **1**

(*b*) Hence, or otherwise, find the value of

$$9 \cdot 3^2 - 0 \cdot 7^2.$$ **(Do not use a calculator)**   **2**

6)

Factorise

$$6ab - 7bc.$$ 1

7)

Factorise

$$x^2 - 4y^2.$$ 1

8)

Factorise fully

$$5x^2 - 45.$$ 2

9)

Factorise **fully**

$$3x^2 + 9x - 12.$$ 3

10)

(*a*) Factorise

$$a^2 + 2ab + b^2.$$ 1

(*b*) Hence, or otherwise, find the value of

$$94^2 + 2 \times 94 \times 6 + 6^2.$$ 2