

Exercise A

1. $a^2 + 3a + 2 = (a + 2)(a + 1)$
2. $b^2 + 4b + 4 = (b + 2)(b + 2)$
3. $c^2 - 2c - 3 = (c - 3)(c + 1)$
4. $d^2 + 4d - 21 = (d + 7)(d - 3)$
5. $e^2 - 10e + 16 = (e - 8)(e - 2)$
6. $f^2 - 6f + 9 = (f - 3)(f - 3) = (f - 3)^2$

Exercise B

1. $3a^2 + 9a + 6 = 3(a^2 + 3a + 2)$
 $= 3(a + 2)(a + 1)$
2. $5b^2 + 20b + 20 = 5(b^2 + 4b + 4)$
 $= 5(b + 2)(b + 2)$
 $= 5(b + 2)^2$
3. $\frac{1}{2}c^2 - c - \frac{3}{2} = \frac{1}{2}(c^2 - 2c - 3)$
 $= \frac{1}{2}(c - 3)(c + 1)$
4. $3d^2 + 12d - 63 = 3(d^2 + 4d - 21)$
 $= 3(d - 3)(d + 7)$

Exam question

$$9.3^2 - 0.7^2 = (9.3 + 0.7)(9.3 - 0.7)$$
$$= 10(8.6) = 86$$