

**Ex 12 Algebra 2***Section A (Non-calculator)*

1 Evaluate –

a)  $\frac{x^2 + y^2}{z}$  when  $x = -2$ ,  $y = 4$  and  $z = 10$

b)  $0.0578 \times 600$

c)  $\frac{3}{8} \div \frac{4}{7}$

d)  $47 \times 29$

*Section B (Knowledge)***Only use your calculator if you need to!**

2 Multiply out –

a)  $(x + 1)(x + 2)$

b)  $(y - 3)(y - 1)$

c)  $(n - 4)(n + 2)$

d)  $(2h + 5)(3h + 2)$

e)  $(2p - 3)(5p - 1)$

f)  $(z + 3)^2$

h)  $(2a + 5)^2$

3 Solve:

a)  $(p + 2)^2 = p^2 + 20$

b)  $(y + 3)^2 = (y + 5)(y + 3)$

c)  $(2x + 3)^2 = 4x(x + 2)$

4 Factorise:

a)  $p^2 - q^2$

b)  $y^2 - 1$

c)  $h^2 - 25t^2$

d)  $2a^2 - 8$

e)  $ax^2 - 9a$

f)  $x^3y - xy^5$

5 Factorise:

a)  $x^2 + 5x + 6$

b)  $y^2 - 6y + 8$

c)  $p^2 - p - 6$

d)  $x^2 + 2x - 3$

e)  $6x^2 + 19x + 10$

f)  $4g^2 - g - 5$

6. Write the following in the form  $(x + a)^2 + b$ 

(a)  $x^2 + 2x + 7$

(b)  $x^2 - 8x + 8$

(c)  $x^2 - 14x - 15$