

**Ex 9 Algebra 1***Section A (Non-calculator)*

1 Evaluate –

a)  $13 + 4 \times 2 \cdot 5$

b)  $\frac{3}{5} \text{ of } \frac{2}{3} - \frac{1}{2}$

c)  $18 \times 27$

d)  $\frac{5}{12} \times \frac{36}{75}$

e)  $3xy - z^2$  where  $x = 4$ ,  $y = 5$  and  $z = -2$

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

2 Remove the brackets –

a)  $3(x + 5)$

b)  $4(y - 3)$

c)  $6(2p + 3)$

d)  $5(1 - h)$

e)  $x(y - z)$

f)  $x(x + y)$

g)  $-3(x + 2)$

h)  $-2(m - 1)$

I)  $-4(a + b)$

3 Multiply out and then simplify –

a)  $5 + 3(x - 2)$

b)  $6 - 2(p + 5)$

c)  $2 + 4(y - 1)$

d)  $8 - 3(h - 4)$

4 Solve:

a)  $3(h - 2) = 15$

b)  $2(m + 5) + 3 = 25$

c)  $x + 7 = 18$

d)  $5x = 100$

e)  $3x - 6 = 30$

f)  $4(x + 3) = 48$

g)  $5x - 3 = 3x + 13$

h)  $3(x + 2) = 2(x + 4)$

i)  $\frac{1}{4}(2x - 1) - 3 = 5$

j)  $\frac{1}{2}(x + 3) + \frac{1}{3}(2x + 1) = 4$

5. Solve these inequalities:-

(a)  $5x + 8 \leq 3x + 18$

(b)  $2(2x + 4) \leq 36 - 6x$

(c)  $15 - 7x \geq 12 - x$

6 Factorise, where possible:

a)  $5h - 25$

b)  $8 - 8x$

c)  $y^2 + 3y$

d)  $2p + 4q + 6r$

e)  $3tR - 6tr$