

## National 4 Homework Exercise 9 Algebra

1. Complete all calculations below without a calculator. ***Show all working!***

(a) 60% of 24g

(b)  $(-150) \div (-3)$

(c)  $44.3 \times 60$

[4]

2. Copy and simplify:-

(a)  $3x + 9x$

(b)  $2y + 4y - 3y + y$

(c)  $5t + 3u + 3 - 2t - u - 1$

[5]

3. Multiply out the brackets:-

(a)  $4(c + 2)$

(b)  $5(3e - 8)$

(c)  $3(7x - 2y + 8)$

[4]

4. Multiply out the brackets and simplify (show all working):-

(a)  $4(x + q) + 1$

(b)  $8(v + 8) + 2v$

(c)  $6 + 3(4p + 5)$

(d)  $3(x + 2) + 6(x - 1) + 5$

[8]

5. Solve each of the following equations:-

(a)  $5x + 3 = 23$

(b)  $7m - 11 = 24$

(c)  $7v = v + 30$

(d)  $14w = 9w + 40$

(e)  $6a + 3 = 2a + 19$

(f)  $7x + 5 = 5x + 17$

(g)  $4(p + 2) = 20$

[15]

6. Factorise:-

(a)  $4x + 10$

(b)  $6g - 15$

(c)  $4f + 2$

(d)  $4q + 18$

(e)  $8 + 18g$

(f)  $12m - 9$

[6]

7. John drives from Edinburgh to Inverness at an average speed of 76 km/h. The journey takes him 3 hours 45 minutes. How far is it from Edinburgh to Inverness?



[3]