Simplifying an expression, multiplying brackets and factorising

Simplifying

1. Simplify:

(a) $2x - 3x + 5x$ **(b)** $8y - 5y - 3y$ **(c)** $2s + 3t - s + 5t$

(d) $x + x + x + x + x$ **(e)** $k + 3k + 4k$ **(f)** $12m + 9m - 2m$

(g) $4p + 2q + 3q$ **(h)** $5x - 5x$ **(i)** $3a + 5b - b - 2a$

[1, 1, 2, 1, 1, 1, 2, 1, 2]

[12 marks]

Multiplying Brackets

2. Multiply out the brackets:

(a) $3(x + 5)$ **(b)** $4(a - 9)$ **(c)** $x(x + 2)$ **(d)** $y(b - 5)$

[2, 2, 2, 2]

3. Multiply out the brackets:

(a) $5(3x + 4)$ **(b)** $6(2b + c)$ **(c)** $10(4 - 5d)$ **(d)** $8(7y - 6)$

[2, 2, 2, 2]

4. Multiply out the brackets and simplify:

(a) $3(x + 7) + 2x$ **(b)** $5(2y + 3) - 6y$ **(c)** $7(s - 4) + 13$

[3, 3, 3]

5. Multiply out the brackets and simplify

(a) $-2(b + 4)$ **(b)** $2(a + 2d) - 3(d - 2a)$ [2, 3]

[30 marks]

Factorising

6. Factorise: **(a)** $3x + 9$ **(b)** $8x - 12$ [2, 2]

7. Factorise:

(a) $12b + 8$ **(b)** $x^2 + 5x$ **(c)** $ab + ac$

(d) $6b - 9c$ **(e)** $2y^2 - 4y$ **(f)** $4ab^2 - 6abc$ [2, 2, 2, 2, 2, 2]

[16 marks]