Factorise each expression fully. **Check by expanding.**

1 (a) $4x + 8y$ (1)

(b) $9a - 6b$ (1)

(c) $10m + 15n$ (1)

(d) $12p - 8q$ (1)

(4 marks)

2 Factorise each expression fully. **More than one factor is possible in each, and the highest one is wanted.**

(a) $12x + 18$ (1)

(b) $20y - 30$ (1)

(c) $24a + 36$ (1)

(d) $18m - 27$ (1)

(4 marks)

3 Factorise each expression fully.

(a) $8x + 12 + 4$ (1)

(b) $5a + 10 + 5a$ (1)

(c) $6y + 9 - 3y$ (1)

(d) $7m + 14 + 7$ (1)

(4 marks)

4 Three expressions each have a factor of 5 taken out. Write the original expression.

(a) $5(x + 4)$ (1)

(b) $5(3y - 2)$ (1)

(c) $5(2a + 3b)$ (1)

(d) $5(4 - m)$ (1)

(4 marks)

5 A rectangle has an area of $12x + 20$ square units.

(a) Factorise $12x + 20$ fully (1)

(b) Write down a possible height and width for the rectangle (2)

(c) A second rectangle has area $12x + 21$. Factorise it fully (1)

(d) Write down a possible height and width for the second rectangle (2)

(6 marks)

6 A pupil factorised $16x + 24$ and wrote $2(8x + 12)$. Their answer expands correctly.

(a) Expand the pupil's answer to check it (1)

(b) Explain what is still wrong with the answer (2)

(c) Write the fully factorised answer (1)

(5 marks)