Simplifying by Collecting Like Terms

Simplify

(a) $x + x + x + x$ (b) $5a + 3a$

(c) $6b - 4b$ (d) $4d - 10d$

(e) $x - 5x + 2x$ (f) $c + c - 2c$

(g) $3x + 2x + 3y - y$

(h) $3a + 5c - a + 2c$

(i) $p + q - q - p$

(j) $3x - x + 3 - 2$

Simplify

(k) $5p - 3q + 2 - 4p + 5 + 4q$

(l) $xy + yx$

(m) $3cd - 4cd + 2cd$

(n) $4y^2 - 3y^2$

(o) $-7ab - ab - 2ab$

(p) $4x^2 + 5x - 3x^2 - 2x$

(q) $x^2 + y^3 - 2x^2 + 4y^3$

(r) $x^2y + xy + x^2y$

A rectangle has a width x cm and a length $x + 5$ cm. Write down a simplified expression for its perimeter.

A square has sides of length $2x - 3$ cm. Write down a simplified expression for its perimeter.

A triangle has sides of lengths $ab + 3$, $2ab - 7$ and $4ab + a$ cm. Write a simplified expression for the perimeter of the triangle.