Collecting Like Terms Exam Practice

Q1. Simplify the following:

a) $3x + 5x - x$

(1 mark)

b) $7x + 5y - 2x + 9y$

(2 marks)

Q2. Simplify the following:

a) $c + c + c$

(1 mark)

b) $-8u + 5v - 12u + 9v + 6$

(2 marks)

Q3. Simplify the following:

a) $3c \times 4d$

(1 mark)

b) $6a \times 5 \times 3b \times 2$

(2 marks)

Q4. Simplify the following:

a) $4a \times 5b + 7a \times -2b$

(2 marks)

b) $10 \times 3u \times 6 \times 3v \times 2$

(2 marks)

Q5. Simplify the following:

a) $\frac{20p - 8p}{4}$

(2 marks)

b) $\frac{9p - 2q + 17p}{2}$

(2 marks)

Q6. Simplify the following expression:

$4xy + 5x + 7xy - 2x$

(2 marks)

Q7. Simplify the following expression:

$-5a^2 + 8a^2 + a^2$

(2 marks)

Q8. Simplify the following expression:

$e^3 + 8f^2 - 1 + 6e^3 - 19f^2 - 13$

(3 marks)

Q9. Simplify the following expressions fully:

a) $2x + 3xy - 41 - 5y + 12x - 11xy - 12$

(3 marks)

b) $\frac{5x + 2x - 35x}{2x}$

(2 marks)

Applied Mixed Practice Problems

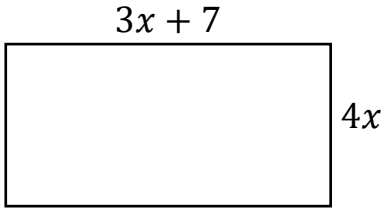
Q10. Alex buys x stamps, Ben buys y stamps and Chad buys $3x$ stamps. Find an expression for how many stamps they have bought altogether.

(2 marks)

Q11. Kay buys p pens, Ben buys twice as many pens as Kay, and Rod buys 2 more pens than Ben. Work out an expression for how many pens they have bought altogether.

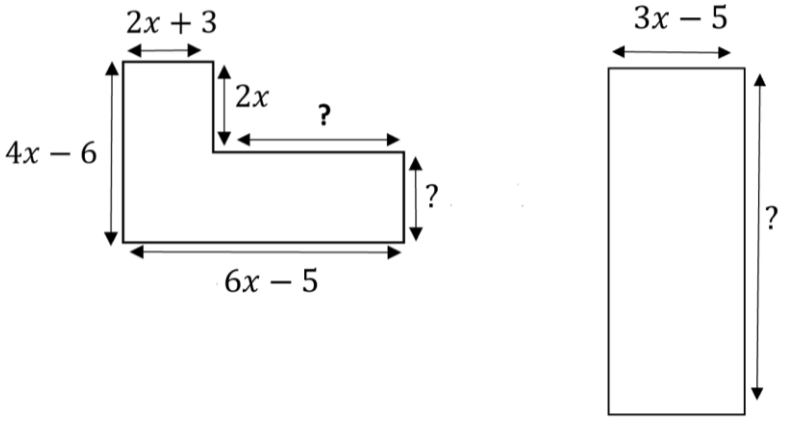
(2 marks)

Q12. Find an expression for the perimeter of the shape below, in terms of x, simplifying your answer fully.



(3 marks)

Q13. The perimeter of these two shapes are the same. For each shape, find an expression for the missing lengths in term of x. Simplify your answers.



(5 marks)