1 A trader buys n sacks of maize at $95{,}000$ shillings each and pays $22{,}000$ shillings for transport.

(a) *Write down* an expression for his total cost (1)

(b) *Calculate* the cost of 7 sacks (1)

(c) He spent $497{,}000$ shillings. *Find* the number of sacks. (2)

(d) *Explain* why your answer to (c) must be a whole number (2)

(6 marks)

2 A rectangle has length $(3x + 2)$ cm and width 5 cm.

(a) *Show that* its perimeter is $6x + 14$ cm (2)

(b) *Work out* the perimeter when $x = 4$ (1)

(c) The perimeter is 50 cm. *Find* the value of x (2)

(6 marks)

3 Cheptoo is x years old. Her mother is 26 years older.

(a) *Write down* an expression for her mother's age (1)

(b) *Show that* their ages add to $2x + 26$ (2)

(c) Their ages add to 60. *Find* Cheptoo's age (2)

(d) *Write down* her mother's age (1)

(6 marks)

4 Do what each instruction says.

(a) *Factorise fully* $24x + 36$ (1)

(b) *Expand and simplify* $4(2x + 3) + 3(x - 1)$ (1)

(c) *Solve* $6(x - 2) = 42$ (1)

(d) *Write down* whether -3 is a solution of $x > -3$ (1)

(4 marks)

5 A pupil is asked: *write down an inequality for* **a lift may carry no more than 12 people**.

(a) *Write down* the inequality (1)

(b) *Explain* why the circle on the number line is closed (2)

(c) *Write down* the largest number of people allowed (1)

(4 marks)

6 **One of these questions cannot be answered as it is written.** Do the ones that can, and for the one that cannot, say why.

(a) *Solve* $4x + 8$ (2)

(b) *Solve* $4x + 8 = 28$ (1)

(c) *Factorise* $4x + 8$ (1)

(5 marks)