

NZC Mathematics Level 4 – Number and Algebra – Equations and Expressions - Excellence
Form and Solve Simple Linear Equations

1. A rectangle has a perimeter of 30cm, the length is four times the width. A Square has the same area as the rectangle. What length are the sides of the Square?

2. Polly and Dolly have the same amount of money at the start of their shopping trip. Polly buys 6 dresses and Dolly buys 4 pairs of shoes. At the end of the shopping trip both Polly and Dolly have no money left. Compare the prices of shoes and dresses using algebra. Explain your working and come to a conclusion. State any assumptions you make along the way.

3. On Monday, Isaiah, Kurt and Joshua shared some lollies that their Father had given them. Kurt got twice as many lollies as Isaiah. Joshua got three times as many lollies as Isaiah plus six lollies. Their Father gave them the same number of lollies each day up to (and including) Friday (5 days in total). Altogether, their Dad gave them 210 lollies. How many lollies did Kurt get on Monday?

I
K
J

Kurt got 12 lollies on Monday

$$2I = K$$

$$3I + 6 = J$$

$$5(I + K + J) = 210$$

$$I + K + J = 42$$

$$I + 2I + 3I + 6 = 42$$

$$6I + 6 = 42$$

$$6I = 36$$

$$I = 6$$

$$K = 12$$

$$J = 24$$