**Quiz**

**Direct And Indirect Proportions in Algebraic Terms**

1. A ball is dropped from a tower. After *t* seconds, the ball has fallen a distance *x* metres. *x* is directly proportional to *t*2. When *t* = 2, *x* = 19.6

(a) Find an equation connecting *x* and *t*. (1)

(b) Find the value of *x* when *t* = 3 (2)

1. The amount of petrol a car uses is directly proportional to the distance it travels. A car uses 3 litres of petrol when it travels 50 km.

(a) Work out the amount of petrol the car uses when it travels 125 km. (2)

(b) Work out the distance the car travels when it uses 5.7 litres of petrol. (2)

1. *V* is inversely proportional to the square of *t. V* = 28 when *t* = 2.5

(a) Express *V* in terms of *t (1)*

(b) Work out the value of *V* when *t* = 6.25 (2)