Firrhill High School

Mathematics Department

Level 5

Assessment Questions

Algebra

Changing the Subject of a Formula

(1) 2010 Paper 1 Q.3

Change the subject of the formula to s.

$$t = \frac{7s+4}{2}.$$

3

(2) 2009 Paper 1 Q.9

A formula used to calculate the flow of water in a pipe is

$$f = \frac{kd^2}{20}.$$

Change the subject of the formula to d.

3

(3) 2008 Paper 1 Q.3

$$W = BH^2.$$

Change the subject of the formula to H.

2

(4) 2007 Paper 1 Q.4

$$P = \frac{2(m-4)}{3}$$

Change the subject of the formula to m.

3

(5) 2002 paper 1 Q.6

$L = \frac{1}{2}(h-t)$.

Change the subject of the formula to h.

2

(6) 2015 Int2 Paper 2

6. Change the subject of the formula

$A = \frac{1}{2}(b+c)d$ to b.

3

(7) 2014 N5 Paper 2

11. Change the subject of the formula $s = ut + \frac{1}{2}at^2$ to a. 3

(8) 2014 Int2 Paper 2

7. Change the subject of the formula

$$p = \frac{qr^2}{3} \quad \text{to } r.$$ 3

9) 2013 Credit Paper 1

4. Change the subject of the formula to r.

$$A = 4\pi r^2.$$ 2

10) 2013 Int 2 Paper 2

8. Change the subject of the formula

$$a = 3b^2 + c$$

to b. 3

11) 2012 Credit Paper 1

3. Change the subject of the formula to m.

$$L = \frac{\sqrt{m}}{k}$$ 2

12) 2012 Int 2 Paper 2

9. A formula used to calculate lighting efficiency is

$$E = \frac{I}{D^2}.$$

Change the subject of this formula to D. 3

13) 2011 Int 2 Paper 2

3. Change the subject of the formula

$$A = 4\pi r^2$$

to r. 2