**Course Mathematics Methods Year \_\_11\_\_\_**

Student name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Teacher name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_07/02/22 Monday Week 2 Term 1\_

**Task type: Response Test 1**

**Time allowed for this task: \_\_\_\_\_40\_\_\_\_\_\_ mins**

**Number of questions: \_\_\_\_7\_\_\_\_\_\_\_**

**Materials required:** No Calculator nor CAS

Standard items: Pens (blue/black preferred), pencils (including coloured), sharpener, correction fluid/tape, eraser, ruler, highlighters

Special items: Drawing instruments, templates, no notes allowed

**Marks available: \_\_40\_\_ marks**

**Task weighting: \_10\_%**

**Formula sheet provided: No**

**Note: All part questions worth more than 2 marks require working to obtain full marks.**

**Question 1 (1.1.6) 16 marks**

Solve the following linear equations showing full working.

1. (2 marks)

1. (2 marks)

1. (2 marks)

1. (2 marks)

1. (2 marks)

1. (3 marks)

1. (3 marks)

**Question 2 (1.1.6) 3 marks**

The area of a trapezium is given by the rule , where and are the parallel sides and is the height in centimetres.

If and , rearrange the formula first to make the subject, then determine .

**Question 3 (1.1.6) 4 marks**

A local taxi company charges customers an upfront cost of $2.50 to hire the taxi and $0.75 per km. Let be the number of km travelled and be the total cost (dollars).

1. Write an equation to represent the above information. (1 mark)
2. How much would a driver charge for a 10 km trip in the taxi? (1 mark)
3. If a customer was charged $8.50, how far did they travel in the taxi? (2 marks)

**Question 4 (1.1.6) 4 marks**

Alicia is twice as old as Lily. Three years from now the sum of their ages will be 42. How old is Alicia now?

Let Lily’s age be . Use an algebraic equation of to solve the problem.

**Question 5 (1.1.6) 3 marks**

Solve the simultaneous equations:

**Question 6 (1.1.6) 6 marks**

In the rectangle , and . Find the perimeter of the rectangle.

**Question 7 (1.1.6) 4 marks**

Solve for in terms of the constants , for the following:

**END OF TEST**

Additional working space

Question number: