**Name: _____**

# ASM Tuition Academy
# Cubic and Reciprocal Graphs

## Instructions:

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
  - there may be more space than you need.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
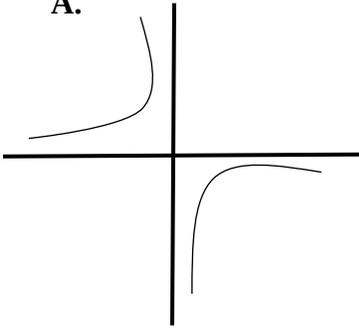- You must **show all you're working out.**

## Information:

- The marks for each question are shown in brackets
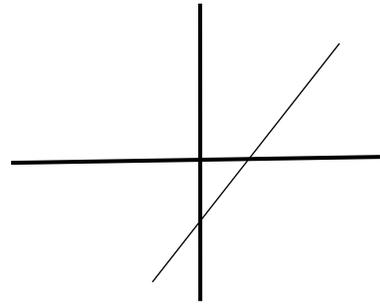  - use this as a guide as to how much time to spend on each question.

## Advice:

- Read each question carefully before you start to answer it.
- Keep an eye on time.
- Try to answer every question.
- Check your answers if you have time at the end.
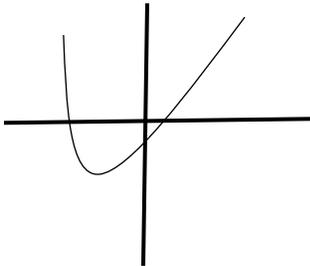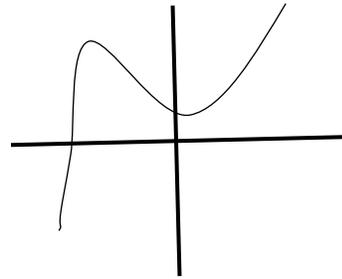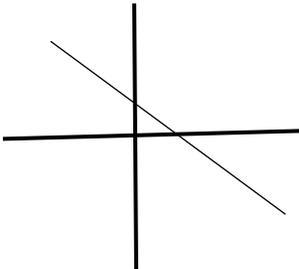
**1. Here are 6 graphs.**

**A.**

**B.**

**C.**

**D.**

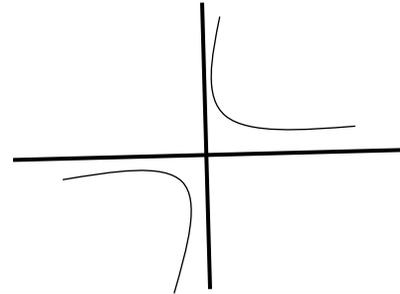**E.**

**F.**

**Write down the letter of the graph that could have the equation:**

i.      $y = 5x - 3$                                   _____

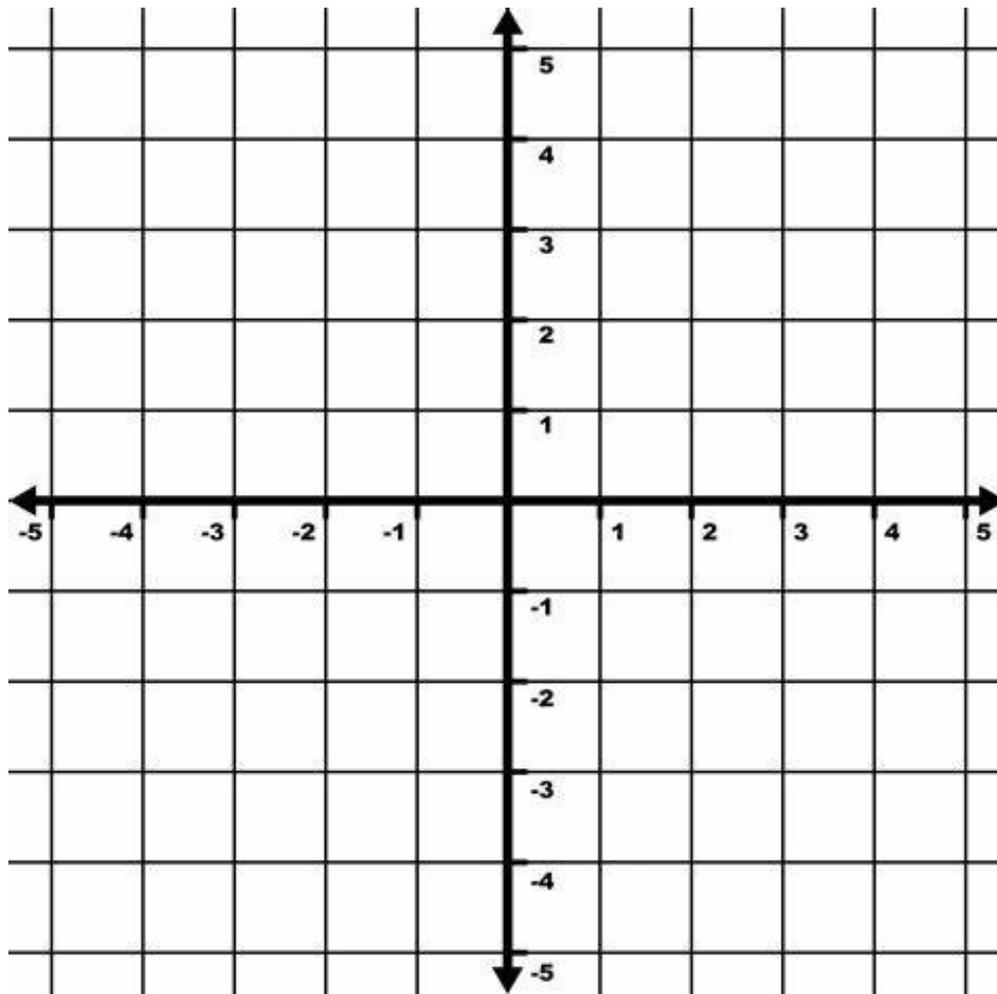ii.      $y = 2x^3 - 4x - 2$                        _____

iii.      $y = 1 / x$                                    _____

**(Total for question 1 is 3 marks)**

**2.**

**a) Complete the table of values for y = 2 / x**

| x | -2 | -1 | 0 | 1 | 2 |
|---|---|---|---|---|---|
| y |  |  |  |  |  |

**b) On the grid, draw the graph of y = 2 / x**



**(Total for question 2 is 4 marks)**

**3.**

**a) Complete the table of values for y = x³ – 4x + 3**

| x | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
|---|----|----|----|---|---|---|---|
| y |    |    |    |   |   |   |   |

**b) On the grid, draw the graph of y = x³ – 4x + 3**
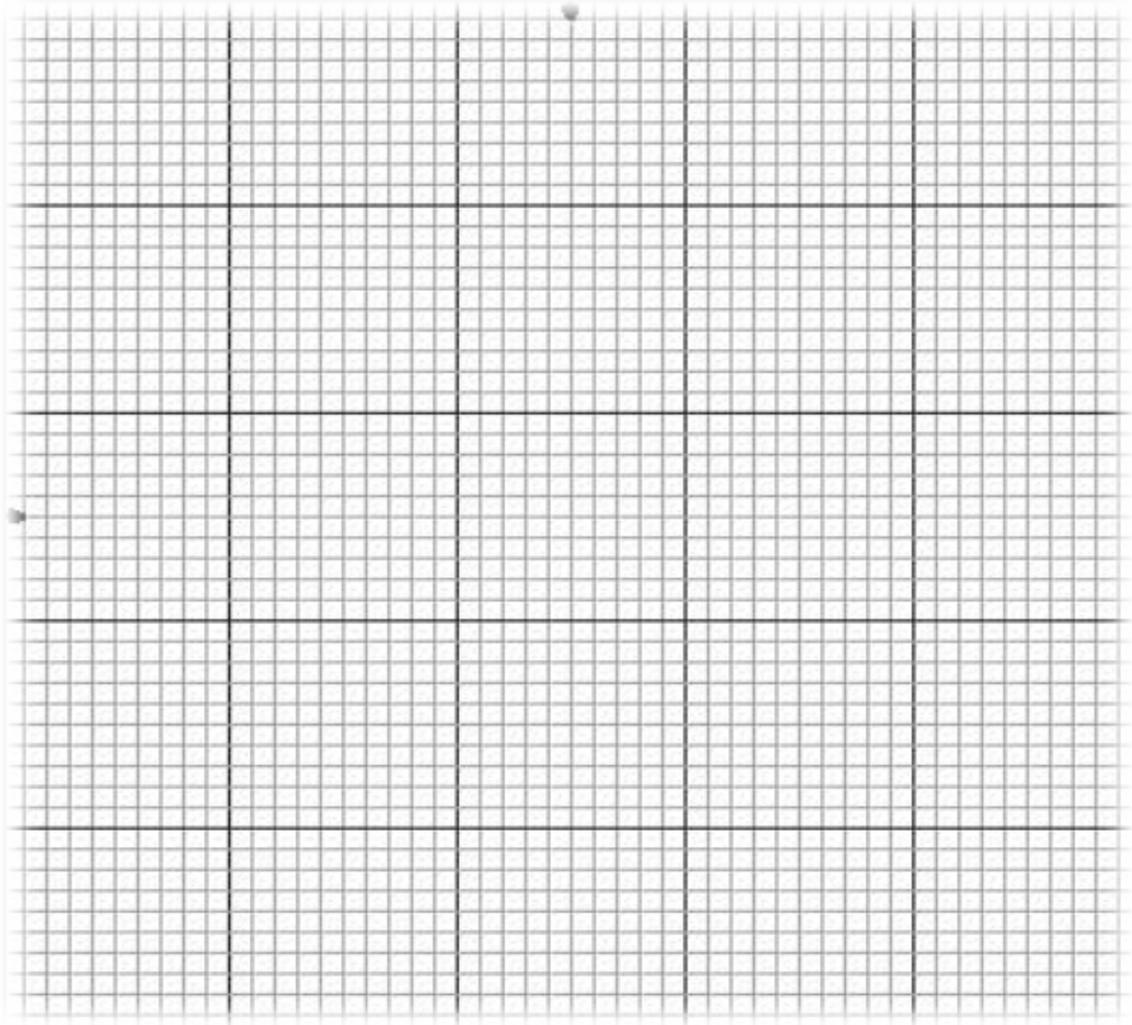


**(Total for question 3 is 4 marks)**

**4.**

**a) Complete the table of values for y = $x^3$ + 4x**

| x | -2 | -1 | 0 | 1 | 2 |
|---|---|---|---|---|---|
| y | | | | | |

**b) On the grid, draw the graph of y = $x^3$ + 4x**
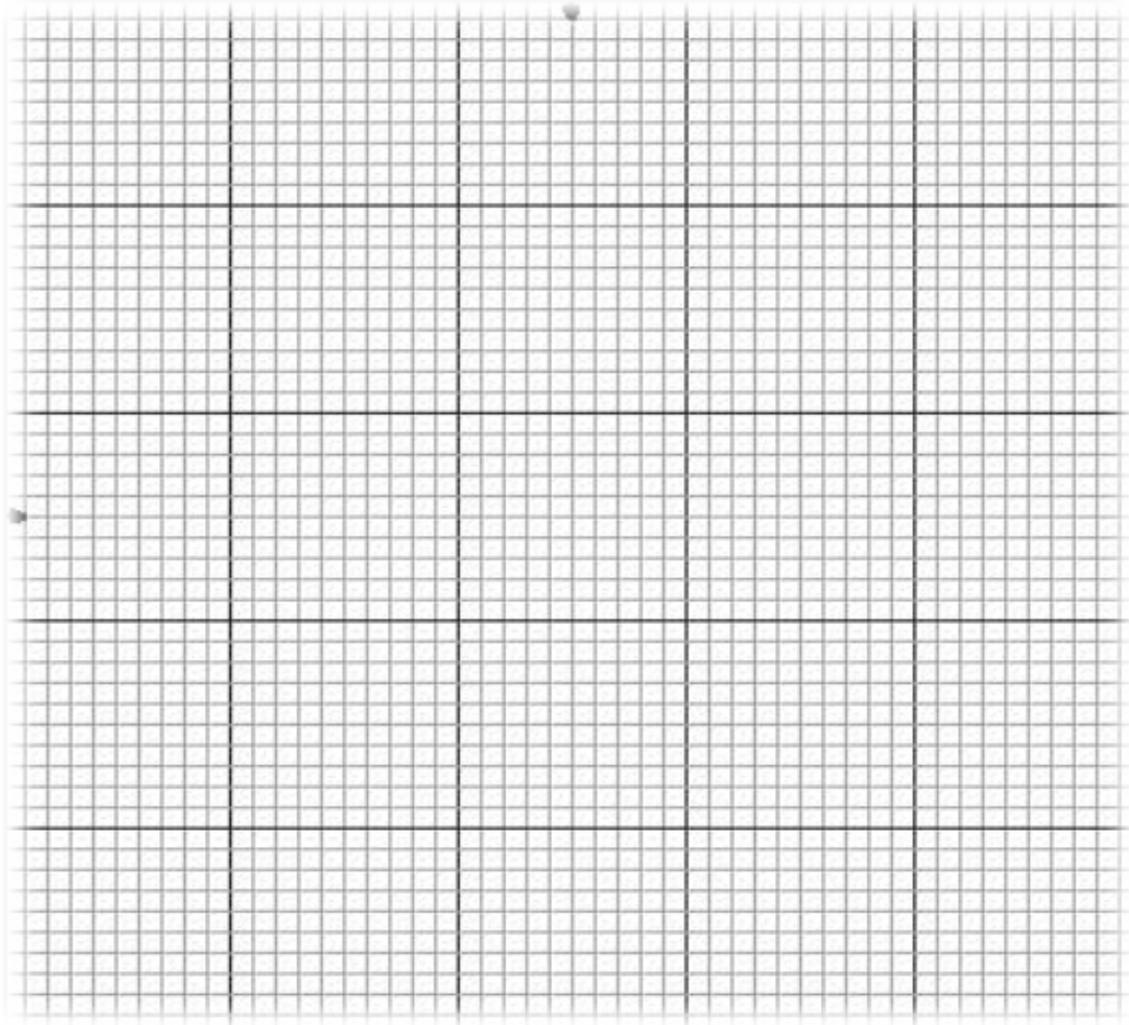
**5.**

**a)  Complete the table of values for y = x³ + x - 5**

| x | -2 | -1 | 0 | 1 | 2 |
|---|----|----|---|---|---|
| y |    |    |   |   |   |

**b)  On the grid, draw the graph of y = x³ + x - 5**
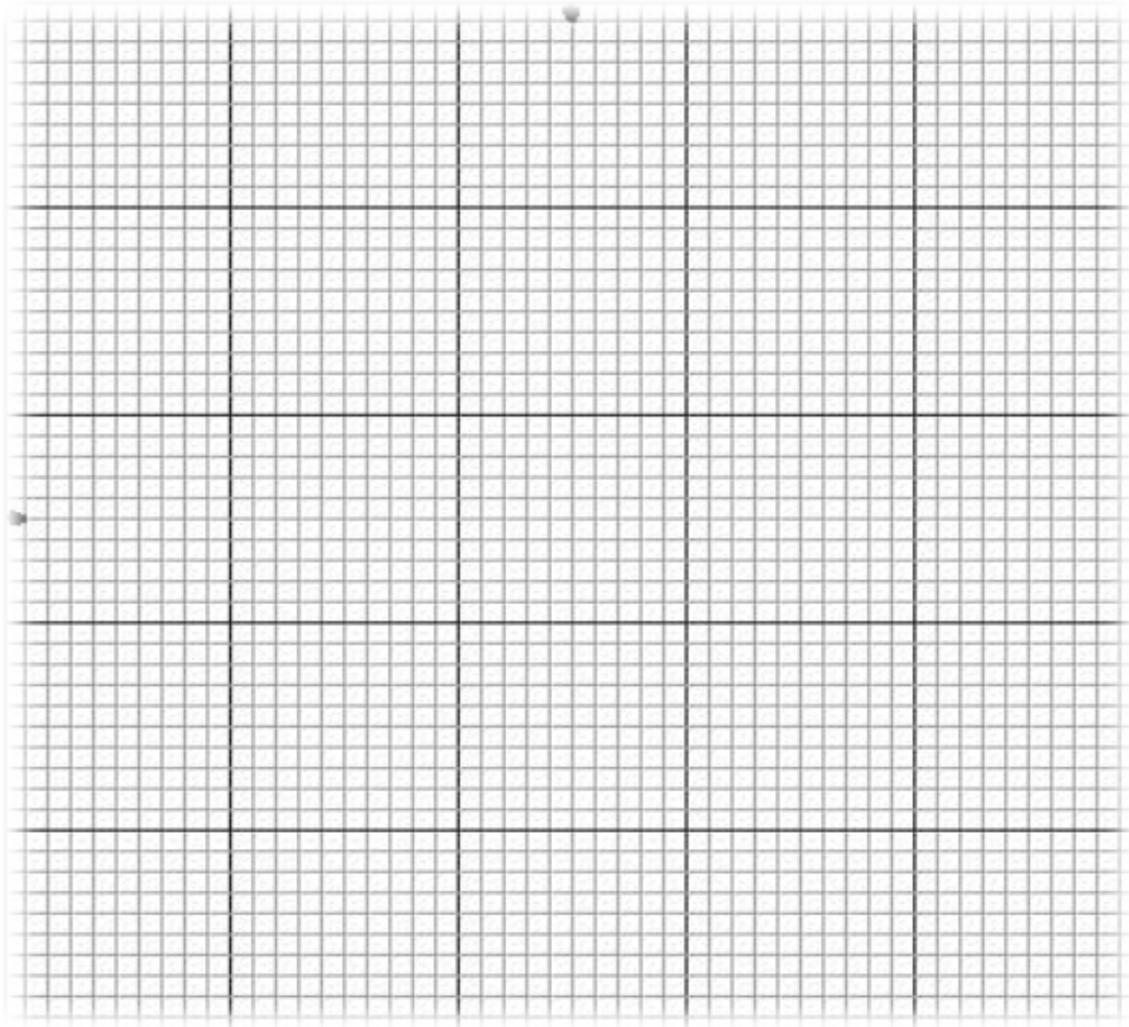


**(Total for question 5 is 4 marks)**

**6.**

**a) Complete the table of values for y = 3x - 2**

| x | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|---|
| y | | | | | | | |

**b) On the grid, draw the graph of y = 3x - 2**
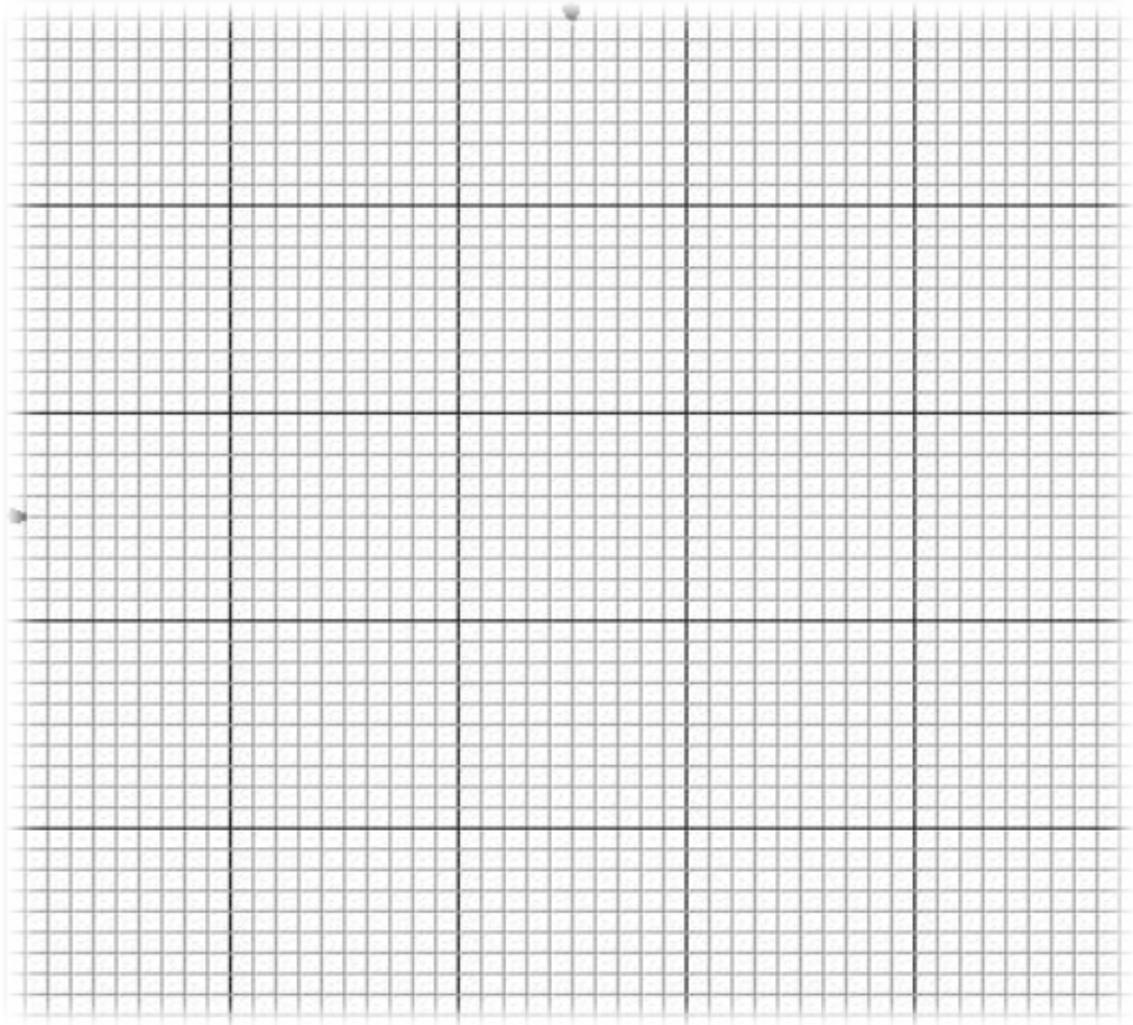


**(Total for question 6 is 4 marks)**

# 7.

**a) Complete the table of values for y = 3 (1 / x) + 2**

| x | -3 | -2 | -1 | -0.5 | 0.5 | 1 | 2 | 3 |
|---|----|----|----|------|-----|---|---|---|
| y |    |    |    |      |     |   |   |   |

**b) On the grid, draw the graph of y = 3 (1 / x) + 2**
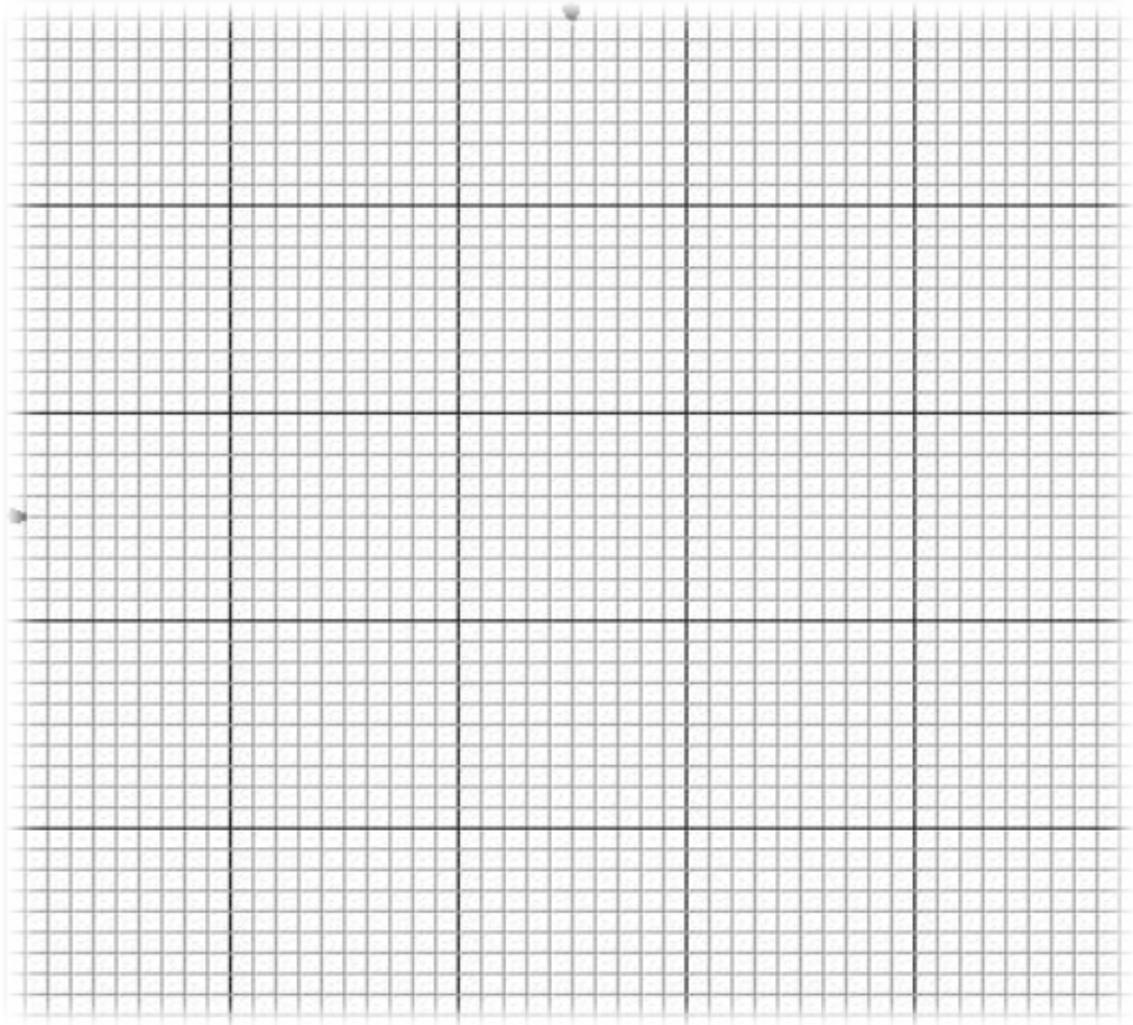


(Total for question 7 is 4 marks)