Year 7 –Mathematics

End of Year Paper 2

Name: _____

Teacher: _____

Total 60 marks

Time allowed : 45 minutes

No Calculators Allowed

MARK SCHEME

1. a. Find $\frac{5}{8}$ of 56

Value	prop
56	1
7	1/8
35	5/8

Correct method attempted [M1]

35 [A1] (2)

b. Find 45% of 180

Val	prop
180	100%
18	10%
72	40%
9	5%
81	45%

Some correct method attempted [M1]

81 [A1] (2)

2. a. Find the value of

309 × 74

	300	9
70	21 000	630
4	1200	36

clear attempt at [M1]
4×9 & 4×300

clear attempt at [M1]
70×9 & 70×300

22866 [A1] (3)

b. Put these calculations in ascending order

30.9 × 7.4, 3.09 × 740, 30 900 × 7.4, 30.9 × 740

[A1]

30.9×7.4, 3.09×740, 30.9×740, 30 900 × 7.4 (1)

3. Circle the 3 values which sum to 1 from the list below.

(0.16), (0.28), 0.36, 0.38, (0.56) [A2]

[A1] for ..8 + ..6 + ..6
or
..8 + ..8 + ..6

(2)

4. Use short division to calculate

2821 ÷ 7 [A1]

403
7) 2821

403 [A1] (2)

5. Here is a sequence

$$-11, -8, -5, -2, \ldots$$

a. Find the next 2 terms of the sequence

[A1] [A1]ft (+3)

1, 4 (2)

b. Find the n^{th} term in the sequence

[A1] [A1]

$3n - 14$ (2)

c. Find the 50th term of the sequence

"3" × 50 − "14" [M1]

136 [A1] ft (2)

d. Will the number 300 appear in the sequence? Please explain your answer.

NO, [A1] none of the values are multiples of 3 [R1]

or

$\frac{300+14}{3}$ not a whole number etc. [R1] (2)

6. Find the value of the following expressions if

$$a = 0.2, \quad b = 6, \quad c = -4$$

a. $3b + 2c$

$3 \times 6 + 2 \times -4$ so: [M1]

$18 + -8$ [A1] for -8

10 [A1] 10 (3)

b. abc

$0.2 \times 6 \times -4$ so: [M1]

Correct method for multiplication [M1]

-4.8 (3)

c. $c^2 - 15a$

$(-4)^2 - 15 \times 0.2$ so: [M1]

[A1] for $-4 \times -4 = 16$

[A1] for $15 \times 0.2 = 3$

$16 - 3$

13 [A1] (3)

7. Calculate the following. Give your answer as a simplified mixed number. or fraction

a. $\frac{11}{12}+\frac{7}{12}$ $= \frac{18}{12} = 1\frac{6}{12} = 1\frac{1}{2}$ [A1]

[A1]

_____ (1)

b. $\frac{11}{12}-\frac{2}{3}$

$\frac{11}{12} - \frac{8}{12} = \frac{3}{12} = \frac{1}{4}$ [A1]

[M1] for correct method

_____ (2)

c. $\frac{10}{12}+\frac{15}{18}$

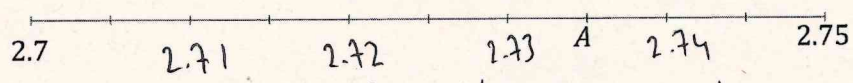
[M1] for common denominators

$\frac{5}{6}+\frac{5}{6} = \frac{10}{6}$

$= 1\frac{4}{6} = 1\frac{2}{3}$ [A1]

_____ (2)

8. a. Find the value marked X on this number line. Give your answer as a decimal.

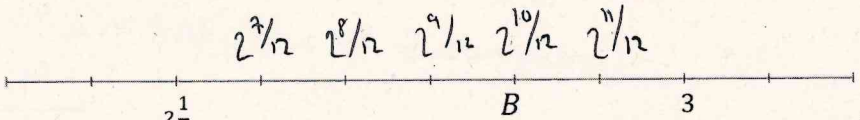


[M1] appropriate method to find steps.

2.735 [A1]

_____ (2)

b. Find the value marked X on this number line. Give your answer as a fraction.



$2\frac{6}{12}$ [M1] appropriate method to find steps

$\frac{17}{6} = 2\frac{10}{12}$ or equiv. [A1]

_____ (2)

c. Put the correct symbol (<, >, =) between these two values.

$A < B$ [A1] (1)

9. Put these calculations in ascending order.
Please show all working for this question.

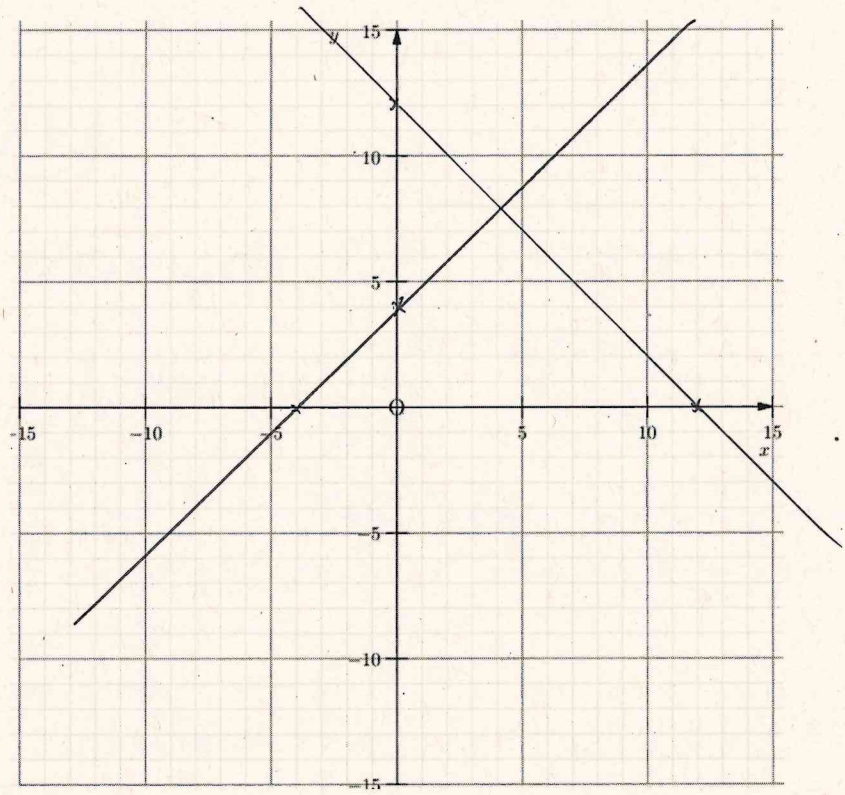
$\frac{1}{3}+2$, $2-\frac{1}{3}$, $2\times\frac{1}{3}$, $2\div\frac{1}{3}$, $\frac{1}{3}\div 2$

$2\frac{1}{3}$ $1\frac{2}{3}$ $\frac{2}{3}$ 6 $\frac{1}{6}$ [A3] -1 for each error

$\frac{1}{6}$, $\frac{2}{3}$, $1\frac{2}{3}$, $2\frac{1}{3}$, 6 [A1] ft their values.

(4)

10.



a. Draw the line $y = x + 4$

[A1] for correct y-int or gradient or sight of correct coord.
[A1] Correct line.

(2)

b. Draw the line $x + y = 12$

[A1] sight of correct coords or correct gradient
[A1] Correct line.

(2)

c. Dev has cats and dogs and no other pets.

He has 12 pets in total, and has 4 more dogs than cats.

How many dogs and how many cats does Dev have?

"C" + "D" = 12 [M1]
or
"D" − "C" = 4

Dogs: 8 [A1]
Cats: 4

(2)

11. Solve the following equations

a. $2h + 12 = 23$

$-12 \qquad -12$ Attempt -12 [M1]

$2h = 11$

$h = \frac{11}{2}$ oe [A1]

(2)

b. $-4w - 3 = -1$

$+3 \qquad +3$ Attempt $+3$ [M1]

$-4w = 2$

$\div -4 \qquad \div -4$ Attempt [M1]

$w = -\frac{1}{2}$

$w = \frac{-1}{2}$ oe

(3)

c. $1.2x + 3.4 = 1.6$

$-3.4 \qquad -3.4$ [M1] Attempt

$1.2x = -1.8$

$\div 1.2 \qquad \div 1.2$ [M1] Attempt

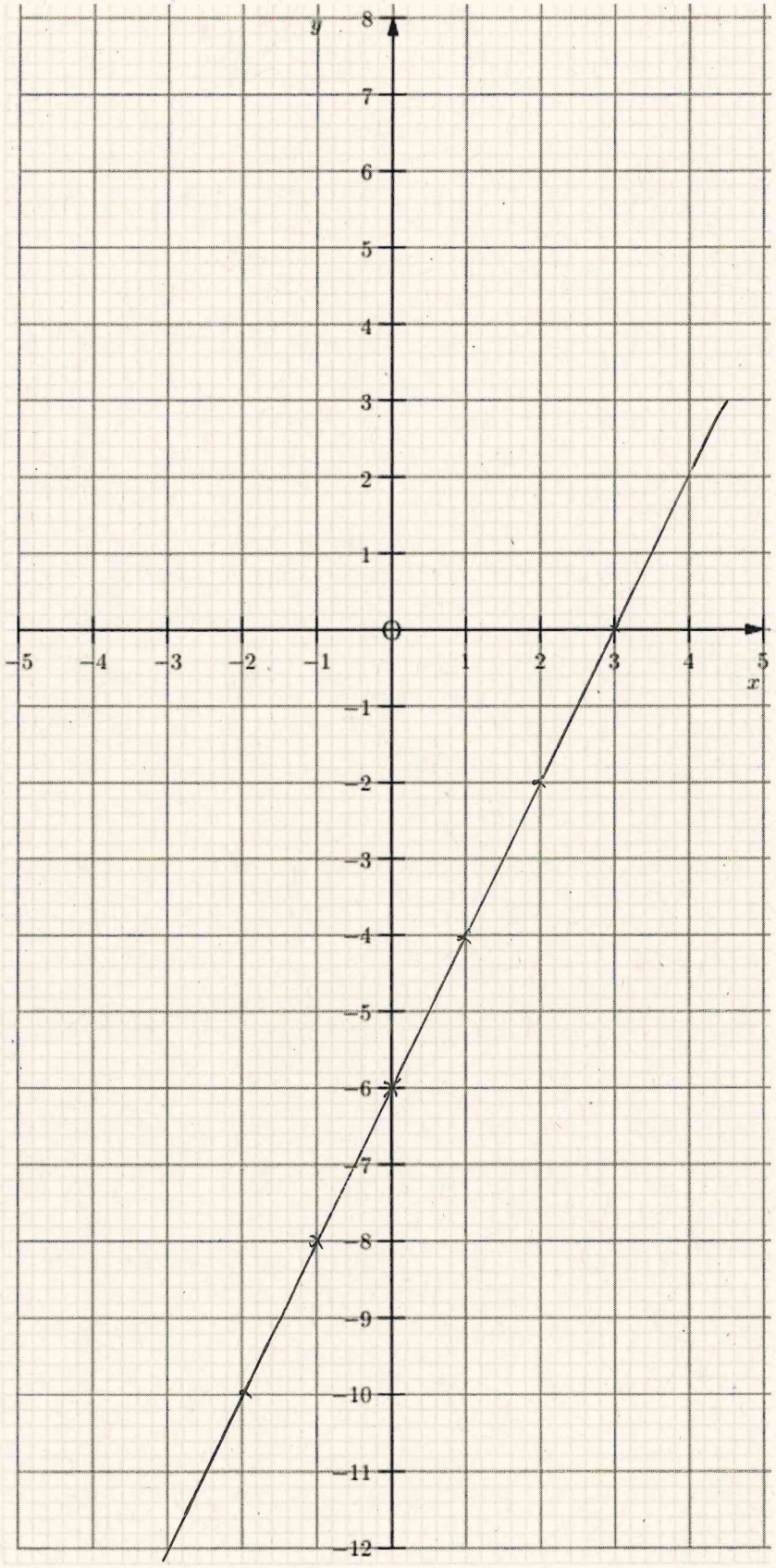
$x = 1.5$

[A1]

$x = 1.5$ oe

(3)

12. Draw the graph of $y = 2x - 6$



1 mark
Sight of correct Coordinate ie (3, 0)
or
Correct y-int
or
Correct gradient

2 marks
Sight of at least 2 correct coordinates.
or
attempt at both gradient & yint

3 marks
Correct line.

(3)

End of Paper – Total 60 Marks