

Year 7 Theme 1-3 Assessment

Theme 1 - Representation of Number

Theme 2 - Addition and Subtraction

Theme 3 – Introducing Algebra

Name _____

Teacher _____

Answer all Questions

No Calculators Allowed

Total 80 marks

Time: 1 hour

1. Write these numbers in words. Your answer must refer to specific place values.

a. 20 102 000 000

1

b. 0.0105

1

2. Calculate in the missing values

a. $333 + a = 1\,000$

b. $b - 10\,200 = 4\,050$

_____ 2

c. $10 - c = 9.876$

_____ 2

d. $5 - d = 15$

_____ 2

e. $e + -17 = -6$

_____ 1

_____ 1

3. Calculate

a. $5 + 4 - 5 \times 4$

b. $\frac{(2 + 7)^2}{11 - 2} - 3 \times 4$

_____ 2

_____ 3

4. Write $\frac{4}{5}$ as a fraction of 2.
Give your answer in its simplest form.

_____ 2

5. Simplify

a. $x + x + x + x - x - x$

b. $2t + 3v + 4t - 5v - 3$

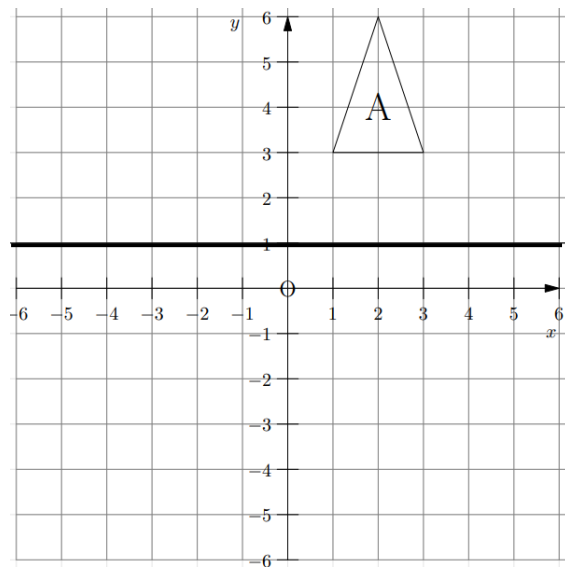
_____ 1

c. $5m^2 + 2m + 4m^2 - 2m$

_____ 2

_____ 2

- 6.



- a. Reflect shape *A* in the mirror line shown

1

- b. Write down the equation of the mirror line

_____ 1

7. Find the value of the following expressions when
 $x = 2, y = 5, z = 4$

a. $3x - 2y$

b. $z^2 - xyz$

c. $4x - 7y + 5x + 8y - 10x$

_____ 2

_____ 3

_____ 3

8. Write an algebraic expression for each to describe each of the following statements

a. k less than n

b. b more than the number that is three times bigger than g

_____ 1

_____ 1

9. Calculate the following.
Give your answer as a fraction

a. $1\frac{7}{10} + \frac{3}{4}$

_____ 3

10. Simplify

$$3xy \times 4y$$

_____ 2

$$2xy + 2x + 2y - 2x \times 2y$$

_____ 2

11. Solve these equations.

a. $k - 10 = 10$

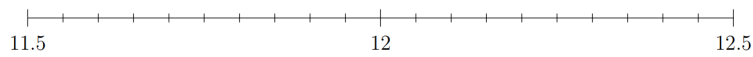
_____ 1

b. $4x + 7 = 24$

_____ 2

c. $18 = -4 + 3x$

12.



_____ 2

a. Mark the number 11.85 on the number line with the letter *A*

2

b. Mark the number $12\frac{7}{20}$ on the number line with the letter *B*

2

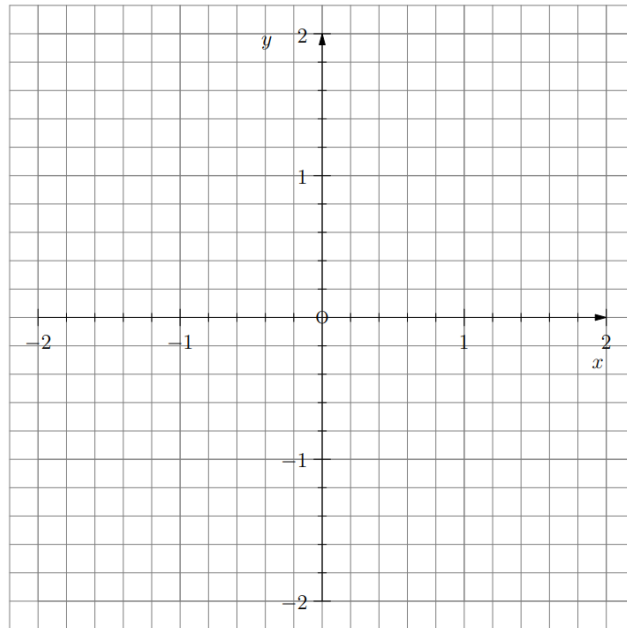
c. Work out the value of

$$32\frac{7}{20} - 31.85$$

You may use the number line above to help.
Give your answer as a simplified fraction.

_____ 2

13.



a. Draw the line $y = -\frac{2}{5}$

1

b. Draw the line $y = x + 0.6$

2

c. Label, with the letter R , the region

$$y < -\frac{2}{5}$$

$$y > x + 0.6$$

2

14. Freya gets pocket money each week.
She gets £ $2x$ for her mum and £5 from her Gran.

Freya spends £ y each week on sweets and saves the rest of her pocket money.

Write an expression to show how much money Freya will save.

£ _____ 2

15. For each pair of statements. Put the correct symbol in the box (<, > or =). For full marks you must show all your working.

a.

$$40\% \text{ of } 72 \quad \square \quad \frac{5}{12} \text{ of } 72$$

b.

$$60 \text{ increased by } 80\% \quad \square \quad 80 \text{ increased by } 60\%$$

2

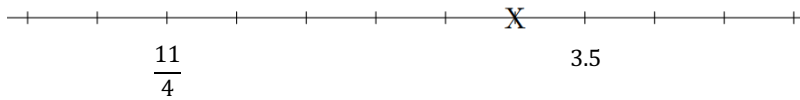
c.

$$\frac{2}{3} \text{ of } 2 \text{ hours} \quad \square \quad \frac{1}{4} \text{ of } 5 \text{ hours}$$

2

2

16. a. Find the value of the number marked X on the number line below



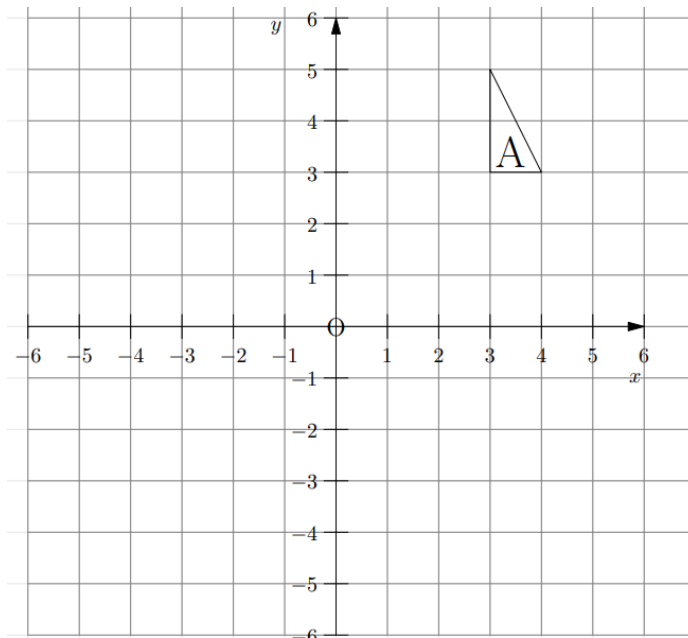
- b. Fill in the missing values for this linear sequence

____, 2.75, _____, _____, _____, _____, 3.375, _____

_____ 3

3

- 17.



Shape A is reflected in the line $x + y = 4$, to make shape B .

Shape B is reflected in the line $y = -x - 1$ to give shape C .

Find the column vector that translates Shape A onto Shape C .

6

End of Test Total 80 Marks