# Year 7 –Mathematics

# End of Year Paper 1

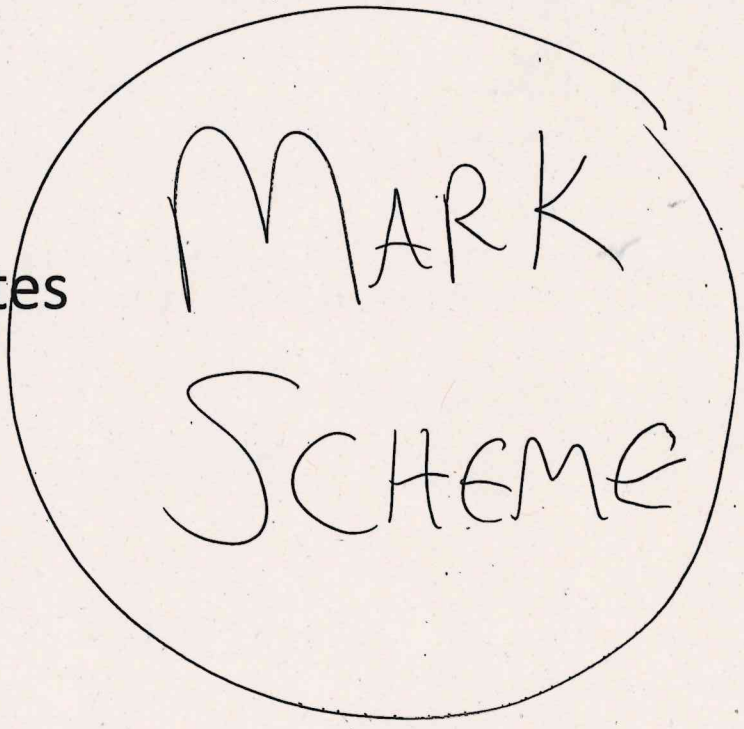
Name: _____

Teacher: _____

Total 60 marks

Time allowed : 45 minutes

No Calculators Allowed



1. Fill in the blanks for this table

| Simplified Fraction | Decimal | Percentage |
|---|---|---|
| $\frac{3}{20}$ | 0.15 | 15% |
| $\frac{3}{1000}$ | 0.003 | 0.3% |
| $\frac{12}{25}$ | 0.48 | 48% |

$\frac{48}{100}$

[A1] for each correct row

(3)

2. David needs to buy 40 dictionaries. He looks at the prices at two shops.

| Shop | Deal |
|---|---|
| Books 2go | 12 dictionaries for £45 |
| Bargain Books | 15 dictionaries for £54 |

What is the difference in price for 40 dictionaries?

Books 2go

| Cost | books |
|---|---|
| 12 | £45 |
| 4 | £15 |
| 40 | £150 |

Bargain Books

| Cost | books |
|---|---|
| 15 | £54 |
| 5 | £18 |
| 40 | £144 |

[M1] for some correct scaling

[A1] for either correct value (150 or 144)

[M1] "150" - "144"

[A1] £6.

(4)

3. a. Circle the two calculations which are correct uses of distributivity/partitioning of

$$408 \div 12$$

$\frac{408}{4} + \frac{408}{3}$ $\quad$ $\frac{360}{12} + \frac{48}{12}$

$\frac{400}{12} + \frac{8}{12}$ $\quad$ $\frac{204}{6} + \frac{204}{6}$

(2)

b. Calculate

$$408 \div 12$$

[M1] Some correct method attempted.

[A1] 34

(2)

4. Simplify the following expressions

a. $t + t + t$

$3t$ [A1] (1)

b. $11v + 9p - 4v + 8p$

[A1] [A1]

$7v + 17p$ (2)

c. $y^2 - 2y + y^2 - 2y + y^2 - 2y$

[A1] [A1]

$3y^2 - 6y$ (2)

5. Find the value of each of these calculations

a. $2 \times 5 - 4 \times 3$

$10 - 12$ soi [M1]

$-2$ [A1]

(2)

b. $2 \times 3^3 - 5 + 7$

$2 \times 27 - 5 + 7$ 27 soi [A1]

$54 - 5 + 7$ Attempt at $2 \times "3^3"$ [M1]

56 [A1] (3)

c. $\dfrac{(2+2) \times (3+2)}{2 + 2 \times 3 + 2}$ [M1] Correct order of operations

$\dfrac{4 \times 5}{2 + 6 + 2}$

$\dfrac{20}{10}$ [A1] for either 20 or 10

2 [A1] (3)

6. Sally is paid £12 each hour to work in a warehouse.
She is given a pay rise of 15%.

a. Find Sally's new wage.

| Value | % |
|---|---|
| £12 | 100% |
| £1.20 | 10% |
| £0.60 | 5% |
| £1.80 | 15% |

(M1) Correct method for 15%

12 + "1.80" [M1]

13.80 (3)

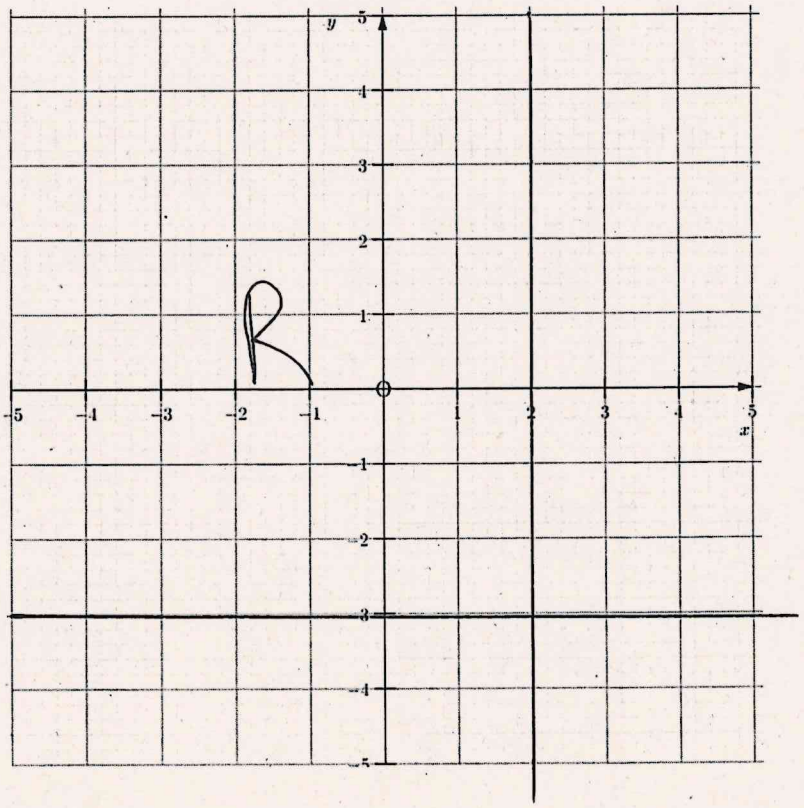
b. How much **more** will Sally earn in each 8 hour shift, after her pay rise?

Either $12 \times 8 = 96$ [M1] or "1.80" × 8 [M1]
15% of 96 [M1] Correct method [M1]
or "13.80" × 8 − 12 × 8 [M1]
Correct method for "13.80 × 8" [M1]

£14.40 [A1] (3)

7. a. On the axes below draw the lines

$x = 2$
$y = -3$




[A1] for each

(2)

b. Label the region, $R$, that satisfies both inequalities

$x < 2$
$y > -3$

[A1]

(1)

8. Work out the value of the following

a. $-3 + -6$

$-9$ (1) [A1]

b. $-3 \times -6$

$18$ (1) [A1]

c. $-3 - -6$

$3$ (1) [A1]

d. $-3 \div -6$

$\frac{1}{2}$ oe (1) [A1]

9. Write an expression to describe each of the following:

a. The number of sweets each person would receive if $k$ sweets are shared between $m$ people.

$\frac{k}{m}$ or $k \div m$ (1) [A1]

b. The total distance a person runs in one week if they run $p$ kilometres every day from Monday to Friday and run $j$ kilometres on each day of the weekend.

$5p + 2j$ (2)

10. Calculate the value of

$1.65 \div 1.5$

Attempt at $165 \div 15$ [M1] using a correct method

Correct scaling of [M1] Answer "11" $\div 10$

1.1 [A1] (3)

11. Fill in the missing fraction

a. $\frac{3}{5} \times \frac{9}{10} = \frac{27}{50}$ [A1] oe

[M1] correct method attempted eg for $\frac{3}{5} \times \frac{9}{10}$

_____ (2)

b. $\frac{3}{5} \times \frac{3}{2} = \frac{9}{10}$ [A1] oe

[M1] Attempt at $\frac{9}{10} \div \frac{3}{5}$

_____ (2)

c. $\frac{9}{10} \times \frac{2}{3} = \frac{3}{5}$ [A1] oe

[M1] Attempt to find appropriate equivalent fraction or $\frac{3}{5} \div \frac{9}{10}$

_____ (2)

12. a. Expand

$2y(y-3)$

[M1] attempt to multiply both terms by $2y$

$2y^2 - 6y$ [A1]

_____ (2)

b. Simplify

$2y \times 3y$

[A1] [A1]

$6y^2$

_____ (2)

c. Expand and simplify fully

$2y(y-3) + 2y \times 3y$

"$2y^2 - 6y$" + "$6y^2$" [M1]

$8y^2 - 6y$ [A1] ft from above

_____ (2)

d. Fully factorise

$8y^2 - 6y$

$2y(4y-3)$ [A2]

[A1] for either $2y$ or some correct factorisation

_____ (2)

13. Calculate the value of

$$1\frac{2}{3} \div 2\frac{1}{5}$$

$\frac{5}{3} \div \frac{11}{5}$ Correct method for finding improper fractions [M1]

$\frac{5}{3} \times \frac{5}{11}$ or $\frac{5}{3} \div 11 \div \frac{1}{5}$ [M1]

$\frac{25}{33}$ [A1]

(3)

**End of Paper – Total 60 Marks**