

MATHS MS

1 a. Seven hundred and thirty three billion, Seven hundred and thirty six million, three two hundred and fifty two thousand, one hundred and thirty Seven.

b. Twenty nine billion, three hundred and seventy four million, eight hundred and eight thousand and forty one.

2 a. 3487000

b. 880000

3 a. 40000

b. 9000000000

4. Total number of students

$$= 239 + 237$$

$$= 476$$

$$\text{Remaining} = 476 - 28$$

$$= 448$$

5. ~~Let 36 be the total number of mangoes~~
 $36 \div 5$

$$5. (5 \times 6) + 3$$

$$30 + 3$$

$$= 33$$

$$6. a) 3469 - 2654$$

$$= 815 \Rightarrow \text{Remaining bags}$$

$$\text{Number of kilograms} = 815 \times 90$$

$$= 73350$$



b) $815 + 468$
 1283 bags.

7. L.C.M of 40, 45, 60

2	40	45	60
2	20	45	30
2	10	45	15
3	5	45	15
3	5	15	5
5	5	5	5
	1	1	1

$$= 2^3 \times 3^2 \times 5$$

$$= 8 \times 9 \times 5$$

$$= 360 \text{ minutes} = \frac{360}{60} \text{ hrs} = 6 \text{ hrs}$$

next time they ring together = $7:00 \text{ am} + 6 \text{ hrs}$
 $= 1300 \text{ hrs}$
 $= 1:00 \text{ pm}$,

8. ~~LCM~~ G.C.D of 36, 84, 90

2	36	84	90
3	18	42	45
	6	14	15

$$= 2 \times 3 = 6 \text{ litres}$$

$$\begin{aligned}
 9. \text{G.C.D} &= 30 = 2 \times 3 \times 5 \\
 \text{L.C.M} &= 900 = 2^2 \times 3^2 \times 5^2 \\
 \text{1st number} &= 60 = 2^2 \times 3 \times 5 \\
 \text{2nd number} &= 150 = 2 \times 3 \times 5^2 \\
 \text{3rd number} &= 450 \text{ or } 18
 \end{aligned}$$

$$\begin{aligned}
 10 \text{ } 24-3 \\
 = 21^\circ\text{C}
 \end{aligned}$$

$$11 \frac{1}{2} \left\{ \frac{3}{5} + \frac{1}{4} \left(7\frac{1}{3} - \frac{3}{7} \right) \right\}$$

$$11 \frac{1}{2} \left\{ \frac{3}{5} + \frac{1}{4} \left(7\frac{1}{3} - \frac{3}{7} \text{ of } \frac{3}{2} \div 5 \right) \right\}$$

$$\frac{1}{2} \left\{ \frac{3}{5} + \frac{1}{4} \left(7\frac{1}{3} - \frac{9}{14} \div 5 \right) \right\}$$

$$\frac{1}{2} \left\{ \frac{3}{5} + \frac{1}{4} \left(7\frac{1}{3} - \frac{9}{14} \times \frac{1}{5} \right) \right\}$$

$$\frac{1}{2} \left\{ \frac{3}{5} + \frac{1}{4} \left(7\frac{1}{3} - \frac{9}{40} \right) \right\}$$

$$\frac{1}{2} \left\{ \frac{3}{5} + \frac{1}{4} \left(\frac{463}{240} \right) \right\}$$

$$\frac{1}{2} \left\{ \frac{3}{5} + \frac{463}{840} \right\}$$

$$\frac{1}{2} \left\{ \frac{967}{840} \right\}$$

$$= \frac{967}{1680}$$

$$12a) \frac{1}{2} + \frac{1}{9} = \frac{7}{36}$$

$$\text{Remainder} = \frac{29}{36}$$

$$b) \frac{29}{36} = 330$$

$$\begin{array}{r}
 36 = ? \quad \frac{36 \times 330 \times 36}{36} \\
 \frac{36}{36} \quad \frac{29}{36}
 \end{array}$$

$$= 409.661 =$$

$$13) a) 0.\dot{2}1\dot{5}$$

$$\text{Let } r = 0.215215215$$

$$10r = 2.15215215$$

$$100r = 21.5215215$$

$$1000r = 215.215215$$

$$\frac{999r}{999} = \frac{215}{999}$$

$$r = \frac{215}{999}$$

$$b) 0.\dot{6}\dot{7}$$

$$\text{Let } r = 0.67777$$

$$10r = 6.7777$$

$$100r = 67.777$$

$$\frac{90r}{90} = \frac{61}{90}$$

$$r = \frac{61}{90}$$

14

$$a) 3p + 6n - 2(p - 10p)$$

$$3p + 6n - 2p + 20p$$

$$3p - 2p + 20p + 6n$$

$$21p + 6n$$

$$b) 6x^2m - (4x^2m + mx^2) + x^2$$

$$6x^2m - 4x^2m - mx^2 + x^2$$

$$6x^2m - 4x^2m - mx^2 + x^2$$

$$2x^2m + x^2$$

$$x^2(m+1)$$

Let x be the son's age (present age).
 15 Father = $3x$
 Son = x

$$x + 5 + 3x + 5 = 58$$

$$4x + 10 = 58$$

$$\frac{4x}{4} = \frac{48}{4}$$

$$x = 12$$

father = 48 yrs

son = 12 yrs

16 % Profit = $\frac{\text{Profit}}{\text{Buying Price}} \times 100\%$

$$= \frac{200}{y} \times 100\%$$

17 $\frac{3Cx - 3Cy + 4Ax - 4Ay}{4A + 3C}$

$$\frac{3C(x-y) + 4A(x-y)}{4A + 3C}$$

$$\frac{(3C + 4A)(x-y)}{(4A + 3C)}$$

$$x - y$$

18a) Let the ^{width} length be x m

$$\text{Width} = x$$

$$\text{Length} = x + 7$$

$$p = 2(L + W)$$

$$120 = 2(x + 7 + x)$$

$$120 = 2(2x + 7)$$

$$120 = 4x + 14$$

$$120 - 14 = 4x$$

$$\frac{106}{4} = \frac{4x}{4}$$

$$x = 29 \text{ m}$$

b) $A = L \times W$

$$= (29 + 7) \times 29$$

$$= 36 \times 29$$

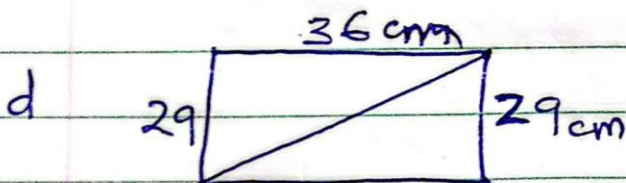
$$= 1044 \text{ cm}^2$$

c) $1 \text{ cm}^2 = 30 / =$

$$1044 \text{ cm}^2 = ?$$

$$= 1044 \times 30$$

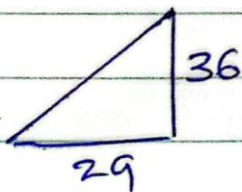
$$= \text{Sh. } 31320$$



$$A = \frac{1}{2} \times 29 \times 36$$

$$= 522 \text{ cm}^2$$

e)



$$36^2 + 29^2 = h^2$$

$$= 1296 + 841 = h^2$$

$$2137 = h^2$$

$$h = \sqrt{2137} = 46.2277 \text{ cm}$$

$$19 \text{ fees} = 5/6$$

$$\text{remainder} = 1/6.$$

$$1/6 = 1500/6 =$$

$$6/6 = ?$$

$$\frac{6}{6} \times 1500 \times \frac{6}{1}$$

$$= \text{Sh. } 9000$$

$$20 \quad 181 - 5 = 176$$

$$236 - 5 = 231$$

GCD of 176, 231

11	176	231
	16	21

$$= 11$$

$$21 \text{ a) } 3457$$

$$3 + 4 + 5 + 7 = 19$$

Since 19 is not divisible by 3, then 3457 is not divisible by 3.

$$\text{b) } 555 \Rightarrow 5 + 5 + 5 = 15$$

15 is divisible by 3 hence 555 is divisible by 3.

$$\text{c) } 634578$$

$$6 + 3 + 4 + 5 + 7 + 8 = 33$$

33 is divisible by 3 hence 634578 is divisible by 3.