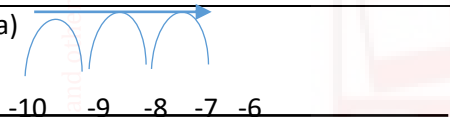
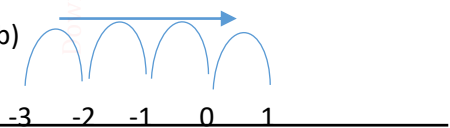
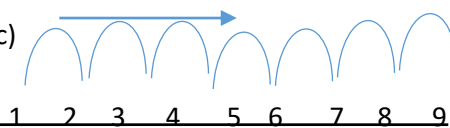


	WORKING	AWARD	EXPLANATION
1.	a) $-2 > -3$ b) $-3 < 4$ c) $5 > -5$	B1 B1 B1	
		03	
2.	$24 = 2 \times 2 \times 2 \times 3 = 2^3 \times 3$ $15 = 3 \times 5$ $16 = 2 \times 2 \times 2 \times 2 = 2^4$ LCM = $2^4 \times 3 \times 5$ $= 16 \times 3 \times 5$ $= 240$	M1 A1	
		02	
3.	a) 7, 2 b) 2, 3	B1 B1	
		02	
4.	a) $\frac{3}{4} \times 100$ $= 75\%$ b) $\frac{1}{4} \times 100$ $= 25\%$	M1 A1 M1 A1	
		04	
5.	$60 = 2^2 \times 3 \times 5$ $80 = 2^4 \times 5$ $120 = 2^3 \times 3 \times 5$ GCD = $2^2 \times 5$ $= 4 \times 5$ $= 20$	M1 A1	
		02	
6.	13,467,589 Digit 7 = 7000 Seven thousand	B1	
		01	
7.	Fifty five million five thousand and five 55,000,000 5000 5		All positions correct 6-6 positions correct Less than 6 positions
		B1	Download this and other FREE revision materials from https://teacher.co.ke/notes

	55,005,005	B1	
		02	
8.	<p>a. $1\frac{3}{4} = \frac{7}{4}$</p> <p>b. $2\frac{6}{7} = \frac{20}{7}$</p>	<p>M1</p> <p>A1</p> <p>M1</p> <p>A1</p>	Must show multiplication and addition to score method
		04	
9.	<p>27,707,807</p> <p>Twenty seven million seven hundred and seven thousand eight hundred and seven</p>	<p>B1</p> <p>A1</p>	
		02	
10.	<p>a) ones</p> <p>b) hundredths</p>	<p>B1</p> <p>B1</p>	
		02	
11.	$256 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 2^8$	04	
12.	<p>a) </p> <p>Ans = +7</p> <p>b) </p> <p>Ans = +1</p> <p>c) </p> <p>Ans = +9</p>	<p>B1</p> <p>B1</p> <p>B1</p>	
		03	

13. What is the place value of total value of digit 6 underlined below..

(3mks)

47,397,263,402



Ten thousands

$$t.v = p.v \times N$$

$$10000 \times 6$$

$$= 60,000$$

14. Round off the following numbers to the nearest number indicated in the brackets.

(3mks)

a) 473,678(100)

473700

b) 379(10)

380

c) 38,679(10,000)

40,000

15. Write the following in symbols.

(2mks)

a. Five billion, five million, five thousand and five.

5,005,005,005

b. Write the following in words 80,000,045,000

(2mks)

Eighty billion, forty five thousand

16. Express the following in symbols

(2mks)

a) 900

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

b) 300

(2mks)

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

c) 196

(2mks)

$$2 \mid 196$$

$$2 \mid 98$$

$$2 \times 2 \times 7 \times 7$$

$$7 \mid 49$$

$$2^2 \times 7$$

$$7 \mid 7$$

$$7 \mid 1$$

d) 64

(2mks)

$$2 \mid 64$$

$$2 \times 2 \times 2 \times 2 \times 2$$

$$2 \mid 16$$

$$= 2^5$$

2 8

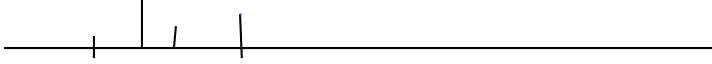
4

2 2 2

17. Use the number line to perform the following.

a) $(+5) - (-2)$

(2mks)



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b) $(+2) + (+3)$

(2mks)

c) $-7 - (-8)$

(2mks)

18. The G.C.D of two numbers is 12 and their L.C.M is 240. If one of the numbers is 60. Find the other number. (3mks)

$$N = \text{G.C.D} \times \text{L.C.M} \frac{12 \times 240}{60} = 48$$



19. If $x=-2$, $y=-6$ and $Z=4$. Find the values of

(a) $\frac{4xy}{z}$

(3mks)

$$\frac{4x - 2x - 6}{4} = \frac{4(-2) - 2(-6) - 6}{4} = \frac{-8 + 12 - 6}{4} = \frac{-2}{4} = -\frac{1}{2}$$

(b) $4z + 2y - x$

$4 \times 4 + (2 \times -6) - (-2)$

$16 + (-12) - (-2)$

$16 - 12 + 2 = 6$

(3mks)

20. Three tanks are capable of holding 36, 84 and 90 Litres of milk. Determine the capacity of the greatest vessel which can be used to fill each one of them on exact number of times. (3mks)

3	36	84	90	
2	12	28	30	
	6	14	15	$3 \times 2 = 6 \text{ litres}$

21. Test whether the following numbers are divisible by 3. (4mks)

a) 1257

$1+2+5+7=15$ divisible by 3

b) 7203



$$7+2+0+3=12 \text{ divisible by } 2$$

22. Three bells ring at intervals of 40 minutes, 45 minutes and 60 minutes. If they ring simultaneous at 6.30 a.m. at what time will they next ring together.

(4mks)

2	40	45	60	$2^3 \times 3^2 \times 5$
2	20	45	3	
2	10	45	1	360min
3	5	45	1	1hr=6cm
3	5	15	1	
5	1	1	1	<u>360=6hr</u>
				60 6hrs

1230HRS

23. A bookstore had 30816 exercise books which were packed in cartons. Each carton contained 24 exercise books. The mass of an empty carton was 2kg and a full carton 12kg.

How many cartons were there (2mks)

$$1 \text{ CARTON} = 24\text{bks } 30816$$

$$30816/24=1284 \text{ carto}$$

a. $1284 \times 2568\text{kg}$

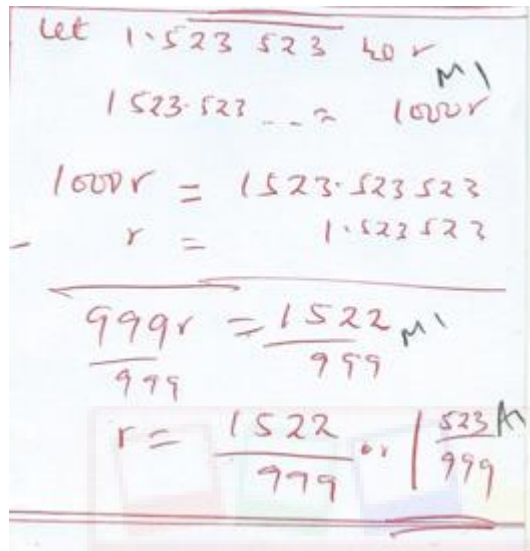
- b. What was the total mass of books alone?

(2mks)

$$24\text{bks}=10\text{kg } 30816=?$$

$$\underline{30816 \times 10=12840\text{kg}}$$

24.
 $\frac{2}{3}$ -two thirds
 $\frac{5}{8}$ -five eights
 $\frac{9}{10}$ -nine tenths
25. Express $1.\overline{523}$ as a fraction.
 (3mks)



Handwritten solution for question 25:

$$\text{Let } 1.\overline{523} = x$$

$$1000x = 1523.\overline{523}$$

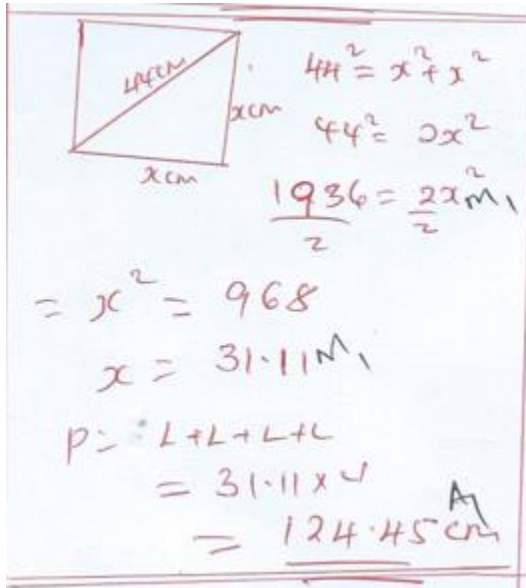
$$- \quad x = 1.\overline{523}$$

$$\hline 999x = 1522$$

$$x = \frac{1522}{999}$$

Final result: $x = \frac{1522}{999}$

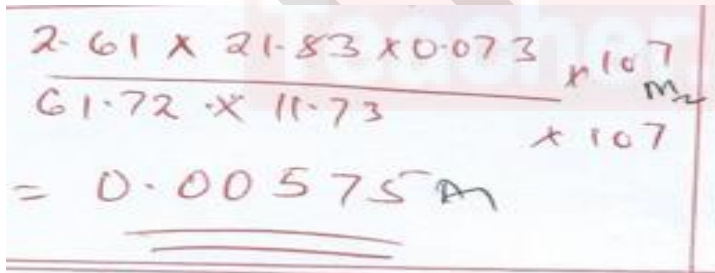
26. The diagonal of a square measures 44cm. Calculate the perimeter of the square. 3mks



$44^2 = x^2 + x^2$
 $44^2 = 2x^2$
 $\frac{1936}{2} = \frac{2x^2}{2}$
 $= x^2 = 968$
 $x = 31.11 \text{ m}$
 $P = 4L$
 $= 4 \times 31.11$
 $= 124.45 \text{ cm}$

27. Calculate;
[3mks]

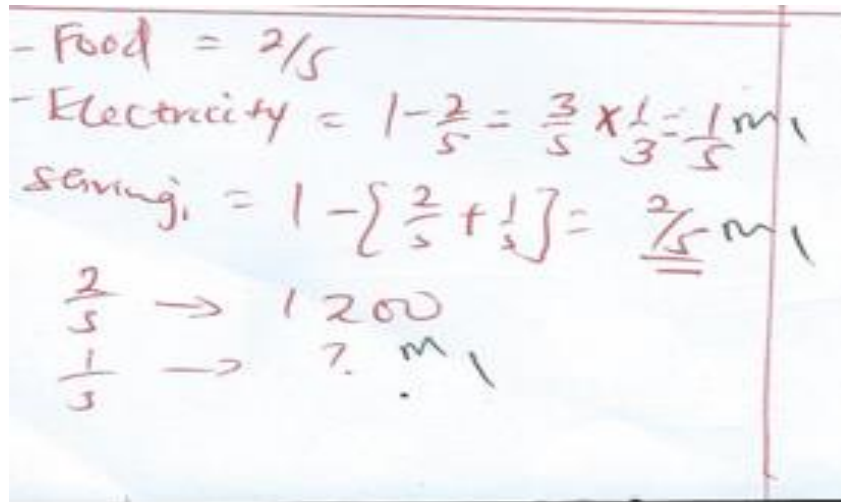
$$\frac{2.61 \times 21.83 \times 0.073}{61.72 \times 11.73}$$



$\frac{2.61 \times 21.83 \times 0.073}{61.72 \times 11.73}$
 $\times 10^7$
 m
 $\times 10^7$
 $= 0.00575 \text{ m}$

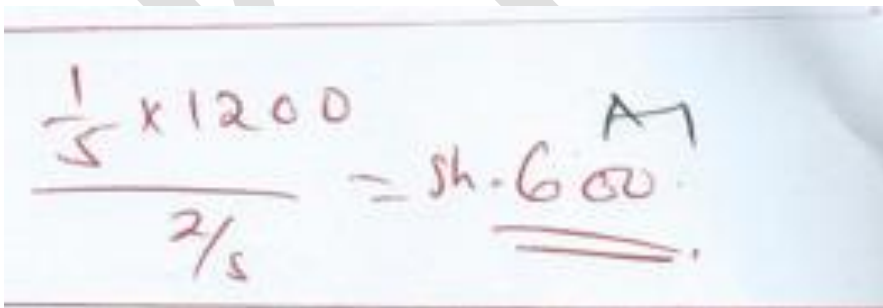
28. Patrick spent $\frac{2}{5}$ of his salary on food, $\frac{1}{3}$ of the remainder on electricity and saved the rest.

(a). What fraction of his salary did he save?
(2mrks).



$- \text{Food} = \frac{2}{5}$
 $- \text{Electricity} = 1 - \frac{2}{5} = \frac{3}{5} \times \frac{1}{3} = \frac{1}{5} \text{ m}$
 $\text{savings} = 1 - \left[\frac{2}{5} + \frac{1}{5} \right] = \underline{\underline{\frac{2}{5} \text{ m}}}$
 $\frac{2}{5} \rightarrow 1200$
 $\frac{1}{5} \rightarrow ? \text{ m}$

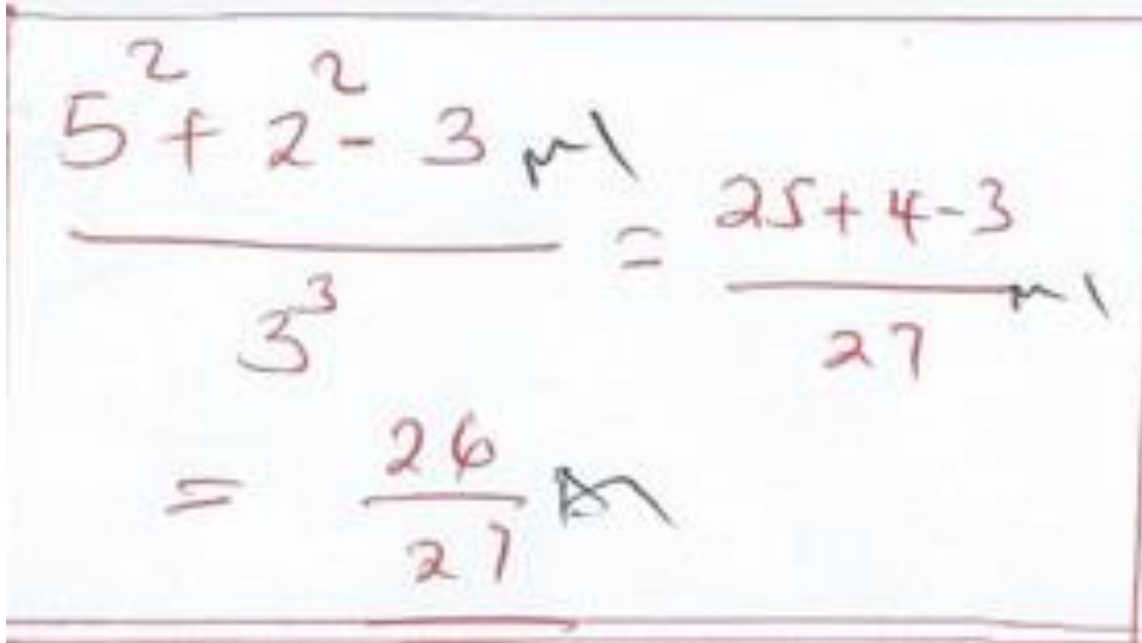
(b). If he spent Sh. 1,200 on food, how much did he spend on electricity?
(2Mks)



$\frac{1}{5} \times 1200$
 $\frac{240}{\frac{2}{5}} = \text{Sh. } \underline{\underline{600}}$

29. If $r=5$, $s=2$, and $t=3$, find the value of;
(3mks)

$$\frac{r^2 + s^2 - t}{t^3}$$



$$\frac{5^2 + 2^2 - 3}{3^3} = \frac{25 + 4 - 3}{27}$$

$$= \frac{26}{27}$$

30. A farmer has three containers of capacity 12L, 15L and 21L, calculate the capacity of:

- a) The smallest container which can be filled by each one of them an exact number of times
(2 Mrks).

$$\begin{aligned}
 \text{a) L.C.M of } 12, 15 \text{ and } 21 \\
 = \underline{\underline{420}} \text{ B2}
 \end{aligned}$$

(b). The largest container which can fill each one of them an exact number of time.(2 Mks)

$$\begin{aligned}
 \text{G.C.D} = 12, 15 \text{ and } 21 \\
 = \underline{\underline{3}} \text{ B2}
 \end{aligned}$$

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