

THE CRANES EXAMINATIONS BOARD



"EVER FORWARD"



MARKING GUIDE FOR P7 STANDARD EXAMS SET 01 2025 **MATHEMATICS**

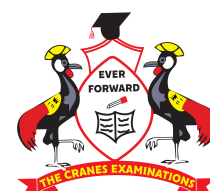


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ABOUT THE CRANES EXAMINATIONS BOARD:

- We are located in Kansanga-Kampala on GABA ROAD just near GALAXY F.M
- We have **HIRED UNEB EXAMINERS** from the best performing schools. That is:-
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 2. **Mpoza Emmie (EXAMINER-SST)**
 3. **Mukisa David (EXAMINER-SCIENCE)**
 4. **Ochudanga Amos (ENGLISH-EXAMINER)**



MTC SET ONE 2025 MARKING GUIDE THE CRANES

SECTION:A

1.
$$\begin{array}{r} 205 \\ \times 4 \\ \hline 820 \end{array}$$

$5 \times 4 = 20$
 $(4 \times 0) + 2 = 0 + 2$
 $2 \times 4 = 8$

2. 

$$\begin{array}{r} 2 \\ \times 10 \\ \hline 20 \end{array}$$

$$\begin{array}{r} 5 \\ \times 2 \\ \hline 10 \end{array}$$

$2 \times 2 = 4$

3. $A = S \times S$
 $0.36h = S^2$
 $\left(\frac{36}{100}\right)h = S^2$

$$\sqrt{\frac{36}{100}} = \sqrt{S^2}$$

$\frac{6}{10} = S$

$0.6h = S$
 $S = 0.6h$
 $L = 0.6 \text{ hectares}$

4. $90, 87, 89, 86, 88, 85, 87$

$-3 \quad +2 \quad -3 \quad +2 \quad -3 \quad +2$

Range = HV - LV
 $= 87 - 85$
Range = 2

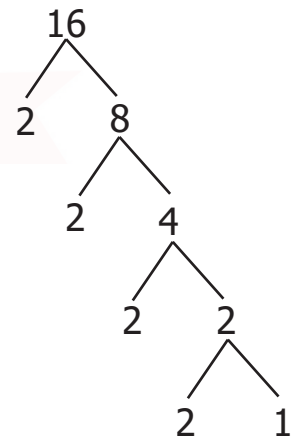
5. $3x + 4y - 2x$
 $3x - 2x + 4y$
 $x + 4y$

6. Two thousand = 2 0 0 0
Two hundred = 2 0 0
Twenty + 2 0
= 2, 2 2 0

7. $\frac{3}{5} \times \frac{2}{7} = \frac{3 \times 2}{5 \times 7} = \frac{6}{35}$

8. $1\text{kg} = 1000\text{g}$
 $0.47\text{kg} = 1000 \times 0.47$
 $= \left(\frac{47}{100} \times 1000\right)\text{g}$
 47×10
 $= 470\text{g}$

9. Number of proper subsets = $2^n - 1$
 $2^n - 1 = 15$
 $2^n - 1 + 1 = 15 + 1$
 $2^n = 16$
 $2^n = 2^4$
 $n = 4$



10. $hr = -3, r = 4, y = 7$

$$\begin{array}{l|l} \left(\frac{hr}{r}\right)^2 + y & \frac{144}{4} + \frac{7}{1} \\ \left(\frac{hxr}{r}\right)^2 + y & \frac{144+28}{4} \\ \left(\frac{-3 \times 4}{4}\right)^2 + 7 & \frac{172}{4} \\ \left(\frac{-12 \times -12}{4}\right) & \frac{-172-42}{-4} \\ \frac{144}{4} + \frac{7}{1} & = 43 \end{array}$$

11. $\frac{3}{7} \times \frac{3}{7} \times 21$ mangoes | $\frac{4}{7} \times \frac{3}{7} \times 21$ mangoes

(3×3) mangoes | (4×3) mangoes

9 mangoes | 12 mangoes

12. $\frac{2}{3} + \frac{1}{5}$ LCM = 15

$$\frac{\left(\frac{2}{3} \times 15 + \frac{1}{5} \times 15\right)}{15}$$

$$\frac{\left(\frac{2}{3} \times \frac{5}{1} + \frac{1}{5} \times \frac{3}{1}\right)}{15}$$

$$\frac{(2 \times 5) + (1 \times 3)}{15} = \frac{10 + 3}{15}$$

$$= \frac{13}{15}$$

13.

T	T	H	T	0
8	7	9	4	6

$(4 \times 10) = 40$
 hundreds
 Difference = $\begin{array}{r} 100 \\ - 40 \\ \hline 60 \end{array}$

14. $(2 \times 5^1) + (4 \times 5^3) + (3 \times 5^2) + (1 \times 5^0)$

$$2 \times 5 + 4 \times 5 \times 5 \times 5 + 3 \times 5 \times 5 + 1 \times 1$$

$$10 + 20 \times 25 + 75 + 1$$

$$10 + 500 + 76$$

$$\begin{array}{r} 500 \\ 76 \\ + 10 \\ \hline 586 \end{array}$$

15. Mean = $\frac{\text{Sum of items}}{\text{Number of items}}$

$$\frac{0 + 2 + 3 + 4 + 5}{5}$$

$$\frac{15}{5} = 3$$

16.

$$S = \frac{D}{T}$$

$$= \frac{30 \text{ km}}{3 \text{ hrs}}$$

$$S = 10 \text{ km/hr}$$

$D = 30 \text{ km}$
 $T = 3 \text{ hrs}$

17. $2q + 90^\circ = 180^\circ$

$$2q + 90^\circ - 90^\circ = 180^\circ - 90^\circ$$

$$\frac{2q}{2} = \frac{90^\circ}{2}$$

$$q = 45^\circ$$

18.

$$\begin{array}{r} 45.89 \\ + 0.1 \\ \hline 45.99 \end{array}$$

19.

$$1 - \frac{3}{5}$$

$$\frac{5}{5} - \frac{3}{5} = \frac{5-3}{5}$$

$$= \frac{2}{5}$$

Let the number be y

$$\frac{2}{5} \text{ of } y = 32$$

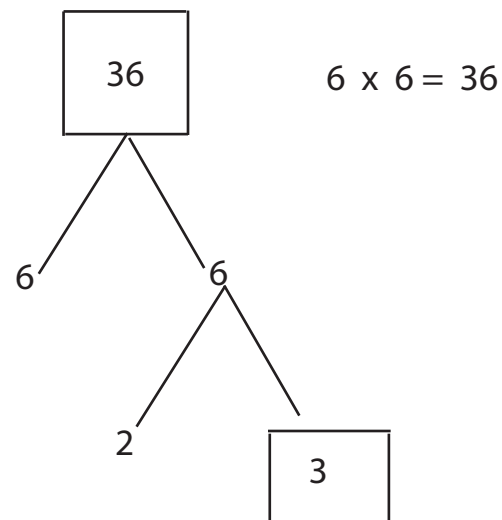
$$5 \times \frac{2}{5} \times y = 32 \times 5$$

$$\frac{2y}{2} = \frac{32 \times 5}{2}$$

$$y = 16 \times 5$$

$$y = 80 \text{ pupils}$$

20.



$$2k) (2y + 2 + y + 3) - (y + 3) = 12.$$

$$2y + y + 2 + 3 - y - 3 = 12.$$

$$3y + 5 - y - 3 = 12.$$

$$3y - y + 5 - 3 = 12.$$

$$2y + 2 = 12.$$

$$2y + 2 - 2 = 12 - 2.$$

$$2y = 10.$$

$$\frac{2y}{2} = \frac{10}{2}.$$

$$y = 5.$$

$$\begin{array}{rcl} 2y + 2 & y + 3 & 2y \\ 2 \times 5 + 2 & 5 + 3 & 2 \times 5 \\ 10 + 2 & 8 & 10 \\ 12 & & \end{array}$$

$$(y - 2) = 5 - 2 = 3$$

$$\begin{array}{r} (12 + 8 + 10 + 2) \\ 20 + 12 \\ 32 \end{array}$$

$$22(a) \quad \frac{1}{4} + \frac{2}{3} \quad \text{LCM} = 12.$$

$$\left(\frac{1 \times 3}{4} + \frac{2 \times 4}{3} \right) = \frac{3}{4} + \frac{8}{3} = \frac{11}{12}.$$

$$\frac{3}{4} + \frac{8}{3} = \frac{11}{12}.$$

Convert 40% to fraction

$$= \frac{40}{100}$$

$$\frac{40}{100} = \frac{2}{5}$$

Fraction for savings.

$$\frac{2}{5} \times \frac{1}{12}$$

$$\frac{1 \times 1}{5 \times 6} = \frac{1 \times 1}{5 \times 6} = \frac{1}{30}$$

b) Let her total income be y .

$$\frac{1}{30} \text{ of } y = \text{shs. } 90,000.$$

$$\frac{y}{30} = \text{shs. } 90,000.$$

$$30 \times \frac{y}{30} = \text{shs. } 90,000 \times 30.$$

$$y = \text{shs. } 1,800,000$$

Bawube	Kasakyi
$3x + 6$	$x + 6$

$$3x + 6 - x + 6 = 28 \text{ years.}$$

$$3x - x + 6 + 6 = 28 \text{ years.}$$

$$2x + 12 = 28 \text{ years.}$$

$$2x + 12 - 12 = (28 - 12) \text{ years.}$$

$$2x = 16 \text{ years.}$$

$$\frac{2x}{2} = \frac{16}{2} \text{ years}$$

$$x = 8 \text{ years.}$$

$$\text{Kasakyi} = (x + 6) \text{ years.}$$

$$(8 + 6) \text{ years,}$$

$$14 \text{ years.}$$

(b)

$$3x + 15$$

$$3 \times 8 + 15$$

$$(24 + 15) \text{ years}$$

$$39 \text{ years}$$

$$24(1)(2 \times 4) + (1 \times 4) + (1 \times 2) + (0 \times 2) + (1 \times 2) + (1 \times 2)$$

$$2 \times 4 + 1 \times 1 = 1 \times 2 + 2 \times 2 + 0 + 1 \times 2 + 1 \times 1$$

$$8 + x = 8 + 2 + 1$$

$$8 + x = 11$$

$$8 - 8 + x = 11 - 8$$

$$x = 3$$

cb)

2	4	8
	0	five

2	5
	five

$$(5+3)-5$$

$$8-3=5$$

1	2	3
		five

$$4-2=2$$

25

24)

$$3(a+4) - 2(2a-4) = 8$$

$$3 \times a + 3 \times 4 - 2 \times 2a - 2 \times 4 = 8$$

$$3a + 12 - 4a - 8 = 8$$

$$3a - 4a + 12 - 8 = 8$$

$$-a + 4 = 8$$

$$-a + 4 - 4 = 8 - 4$$

$$-a = 4$$

$$\frac{-a}{-1} = \frac{4}{-1}$$

$$a = -4$$

(b)

$$\frac{12}{x+4} = 2$$

$$\frac{12}{x+4} \times x+4 = 2(x+4)$$

$$12 = 2a + 8$$

$$12 - 8 = 2a + 8 - 8$$

$$4 = 2a$$

$$\frac{4}{2} = \frac{2a}{2}$$

$$2 = a$$

$$27(a) \quad 3w + 10^\circ + 2w + 3w + 20^\circ = 180^\circ$$

$$3w + 2w + 3w + 10^\circ + 20^\circ = 180^\circ$$

$$8w + 30^\circ = 180^\circ$$

$$8w + 30^\circ - 30^\circ = 180^\circ - 30^\circ$$

$$8w = 160^\circ$$

$$\frac{8w}{8} = \frac{160^\circ}{8}$$

$$w = 20^\circ$$

$$(b) \quad \angle XYZ$$

$$2w + 20^\circ$$

$$2 \times 20^\circ + 20^\circ$$

$$40^\circ + 20^\circ$$

$$60^\circ$$

28(a)

$$\begin{array}{r} \text{TH} \quad \text{TH} \quad \text{H} \quad \text{T} \quad \text{O} \\ 9 \quad 4 \quad 5 \quad 2 \quad 8 \end{array}$$

$$(2 \times 10) = 20$$

$$(4 \times 1000) = 4000$$

The value of 4 is 4000.

$$(b) \quad \begin{array}{r} \text{TH} \quad \text{TH} \quad \text{H} \quad \text{T} \quad \text{O} \\ 9 \quad 4 \quad 5 \quad 2 \quad 8 \end{array}$$

$$(2 \times 10) = 20$$

$$(5 \times 100) = 500$$

$$\text{Quotient} = \frac{500}{20} = 25$$

(c) Ninety thousand, five hundred twenty eight.

29(a) Let the number be y .

$$y = 0.3636 \dots$$

$$100 \times y = 0.3636 \times 100 \dots$$

$$100y = 36.3636$$

$$y = 0.3636 \dots$$

$$99y = 36$$

$$\frac{99y}{99} = \frac{36}{99}$$

$$y = \frac{36 \div 4}{99 \div 4} = \frac{9}{24.75}$$

$$y = \frac{4}{11}$$

$$(b) \quad 3x^2 - yw$$

$$3x^2 - y \times w$$

$$3 \times 4^2 - 4 \times 6$$

$$3 \times 4 \times 4 - 24$$

$$3 \times 16 - 24$$

$$48 - 24$$

$$= 24$$

$$30(a) \quad W = 15$$

$$(ii) \quad X = -6$$

$$(iii) \quad y = +11$$

$$(b) \quad -6 + 11 = +5$$

$$-6 + 11 = +5$$

$$31a) \frac{(3a-4)\eta}{\eta} = \frac{(2a+6)\eta}{\eta}$$

$$3a-4 = 2a+6$$

$$3a-2a-4 = 2a-2a+6$$

$$a-4 = 6$$

$$a-4+4 = 6+4$$

$$a = 10m$$

$$b) (2a-5)m$$

$$(2 \times 10 - 5)m$$

$$(20 - 5)m$$

$$15m$$

$$A = \frac{1}{2} \times b \times h$$

$$= \frac{1}{2} \times 15m \times 8m$$

$$= \frac{1}{2} \times 15m \times 8m$$

$$1 \times 15m \times 4m$$

$$A = 60m^2$$

$$32a) k+3+4+1 = 10$$

$$k+8 = 10$$

$$k+8-8 = 10-8$$

$$k = 2$$

$$b) \text{Mean} = \frac{\text{Sum of data}}{\text{Number of data}}$$

$$= \frac{(60 \times 3) + (70 \times 4) + (80 \times 2) + (90 \times 1)}{3 + 4 + 2 + 1}$$

$$= \frac{180 + 280 + 160 + 90}{10}$$

$$\frac{710}{10}$$

$$= 71$$

$$\therefore \text{Mean} = 71$$

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