SMZ

ZANZIBAR EXAMINATIONS COUNCIL

FORM ONE ENTRANCE EXAMINATION

130 **MATHEMATICS**

TIME: 2.00 HOURS **SOLUTIONS** **TUESDAY 30th NOVEMBER, 2018 A.M**

INSTRUCTIONS TO CANDIDATES

1. **This paper consists of FOUR (4) sections A, B, C and D.**
2. **Answer ALL questions in section A and B. Choose ONE (1) question from section C and ONE (1) question from section D.**
3. **Write your examination number on each page.**
4. **Write all answers in the space provided.**
5. **Use a blue or black pen in writing.**
6. **Cellular phones and unauthorized materials are not allowed in the examination room.**

FOR EXAMINER'S USE ONLY

QUESTION NUMBER	MARKS	SIGNATURE
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
JUMLA		

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1. Find the sum of five hundred and seventy two thousand, two hundred and thirty two and three hundred and thirteen thousand, three hundred and fourteen.
   572,232
   +313,314
   = 885,546

2. Use factors tree to find the prime factors of 86.
   86 = 2 × 43
   Prime factors: 2, 43

3. Find the sum of (0.5 × 9) and (0.3 × 6).
   0.5 × 9 = 4.5
   0.3 × 6 = 1.8
   Sum = 6.3

4. A swimming pool measures 25 m long, 5 m wide and 12 m high. What is its volume in liters?
   Volume = 25 × 5 × 12
   = 1500 m^3
   1 m^3 = 1000 L
   Volume = 1,500,000 L

5. Find the value of m and n.
   from straight line,

   n + 8 = m .....(i)

   also, 60 = n + 8

   so, m = 60, n = 52

6. Find the value of x in the equation 2/3 (2x + 4) + 6 = 10.
   2/3 (2x + 4) = 4
   2x + 4 = 6
   2x = 2
   x = 1

7. The boat started from Zanzibar at 7:15 a.m.
   It reached Dar es Salaam at 1:45 p.m.
   Time taken
   7:15 → 13:45
   = 6 hours 30 minutes

8. What is the area of the figure shown?
   area of trapezium = ½ x h x (a+b)
   = ½ x 3 x (16 + 8)

   Total area = 36 cm^2

9. (a). What name is given to arc AC?
chord

(b). What name is given to line AB?
diameter

(c). Why line DB is not equal to line AB?
AB is a diameter, DB is a **segment**

10. Find the value of
1/2 of (6/5 − 1/2) + 1/2 × 1/2

6/5 − 1/2
= 12/10 − 5/10
= 7/10

1/2 of 7/10 = 7/20
1/2 × 1/2 = 1/4 = 5/20

Total = 12/20 = 3/5

SECTION B
(Answer ANY FOUR)

11(a). Find angle x.
x + (2x + 25) + (x − 9) = 180
4x + 16 = 180
4x = 164
x = 41°

(b). Ali earns sh 5,400 for 24 days. Absent 6 days.
Daily wage = 5400 ÷ 24 = 225
Days worked = 18
Pay = 18 × 225 = sh 4,050

12(a). Find the length of equilateral triangle whose perimeter is 120 cm.
One side = 120 ÷ 3 = 40 cm

(b). Compound interest
P = 10,000
r = 15%
t = 2

$A = P(1 + r)^2$
$= 10,000 \times 1.15^2$
= 13,225

Interest = 3,225

13. (a).
14 bags × 150 kg = 2100 kg
Removed: 14 × 5 = 70 kg
Remaining = 2030 kg

(b).
44,078

308
= 44,386

14.(a). Express 1 1/2% as fraction
1.5% = 1.5/100 = 3/200

(b). Direct proportion

m	15	10	**30**	0.2	**20**
n	3	**2**	6	1/25	4

15. Complete the table

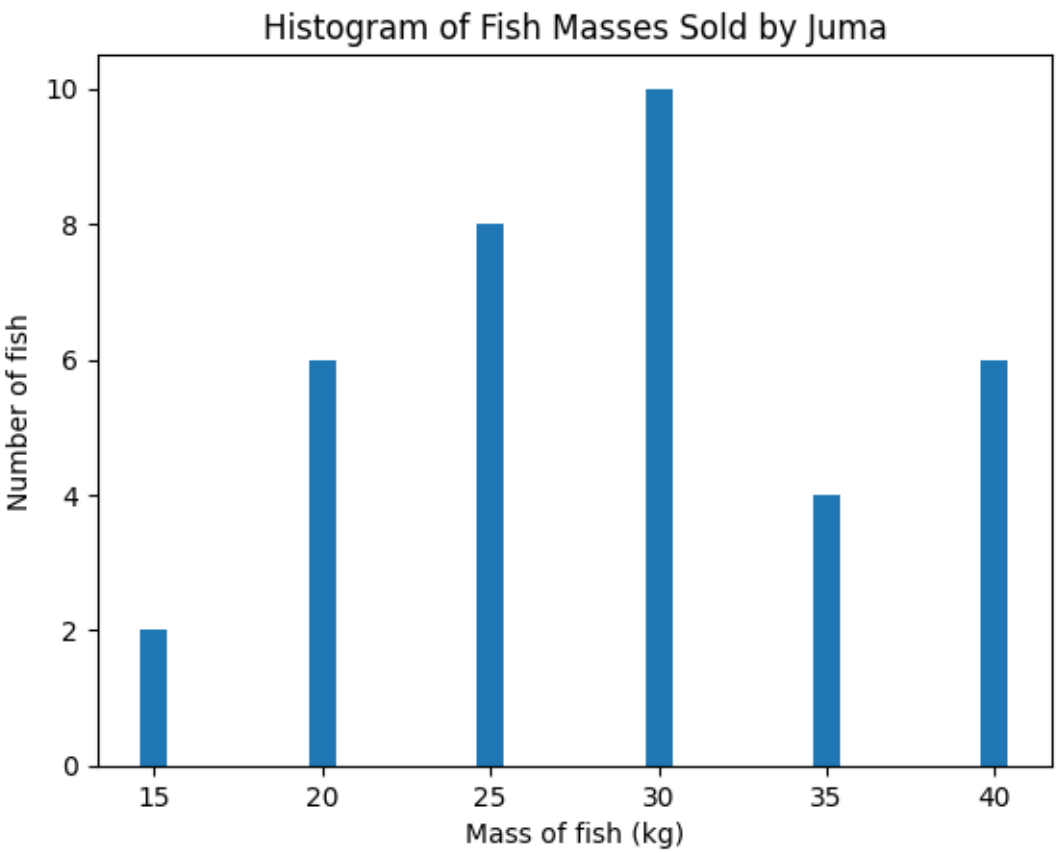
Buying 20,000 → Profit 60%
Selling = 32,000

Buying 35,000, Selling 10,000
Loss = 25,000

Buying 12,000, Profit 3,000
Profit % = 25%

16(a). 2018 Feb 19 was Monday
March 6 = Tuesday

(b). Histogram drawn correctly with class intervals


Histogram of Fish Masses Sold by Juma
Number of fish
Mass of fish (kg)
0
2
4
6
8
10
15
20
25
30
35
40