

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER MAY 2017: BED I PRIMARY

COURSE NUMBER: PED100

COURSE NAME: BASIC NUMERICAL SKILLS

TIME ALLOWED: 3 HOURS

- INSTRUCTIONS:
1. ANSWER QUESTION ALL QUESTIONS.
 2. DOCUMENTS REFERRED TO IN SOME OF THE QUESTIONS ARE ATTACHED. IF YOU DO NOT FIND THEM, ASK FOR THEM.
 3. ANY PIECE OF WRITTEN WORK WHICH IS NOT FOR MARKING PURPOSES MUST BE CROSSED OUT CLEARLY.

SPECIAL REQUIREMENT: Graph Paper

THIS PAPER MUST NOT BE OPENED UNTIL PERMISSION IS GIVEN BY THE INVIGILATOR

1 Write the following numbers in order of size.

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$$\frac{7}{20}, \frac{2}{5}, \frac{3}{10}, \frac{1}{4} \quad [4]$$

- 2 (a) Write the numbers below to the given values

Number	One decimal place	Nearest 100	One significant figure
434.056			
6872.88			

[6]

- (b) By using your answers in (a), estimate 432.056×6872.88 to one significant figure.

[3]

- 3 work out the following

(a) $4\frac{2}{3} - 1\frac{3}{4}$ [3]

(b) $5\frac{3}{5} \div 2\frac{1}{3}$ [3]

(c) $\frac{3}{7} \times 3\frac{1}{5}$ [2]

- 4 (a) Convert the following

(i) 0.12 to a fraction [2]

(ii) 456g to mg [2]

(iii) 0.25% to a fraction [3]

- (b) Work out

(i) $-8 + 12 \div -6$ [2]

(ii) 3.02×0.014 [2]

(iii) $45.3 \div 0.06$

- 5 (a) List the first 5 triangle numbers [3]

(b) Describe this set in full, $\{3, 5, 7, 11, 13, 17\}$ [2]

(c) Express 735 as a product of its prime factors. [3]

6 (a) Simplify

(i) $2(2x - 3y) + 3(x + 4y)$ [2]

(ii) $\frac{x}{5} + \frac{2x-1}{2}$ [3]

(b) Factorise

(i) $12mn - 18m + 6m^2$ [1]

(ii) $x^2 - 4x - 12$ [2]

7 Solve the equations

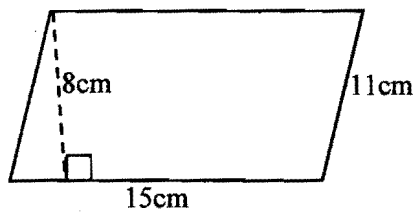
(a) $\frac{3y}{2} + 9 = 6$ [3]

(b) $x^2 + 5x - 14 = 0$ [4]

(c) $\frac{2x+3}{3} - \frac{3x}{4} = 6$ [4]

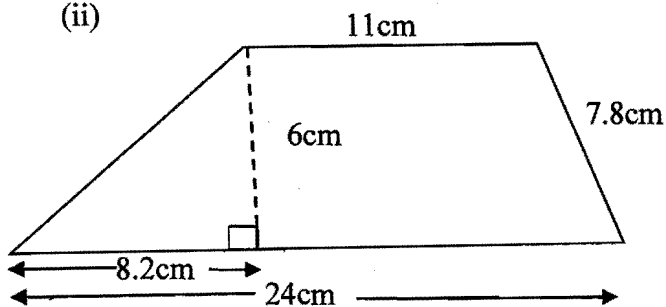
8 (a) Calculate the areas of the following figures

(i)



[2]

(ii)



[4]

(b) You are given that the area of a rectangle is 80 m^2 . Its length is 10 m and its height is $(x+5) \text{ m}$. Calculate(i) the value of x . [2](ii) the area of the rectangle in cm^2 . [3]

9 You are given the Universal set $\mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12\}$.

$$P = \{2, 4, 5, 7, 8\}$$

$$R = \{3, 4, 6, 8, 10, 12\}$$

(a) Draw a Venn diagram for the information above. [2]

(b) List

(i) $A^1 \cap B$ [2]

(ii) $(A \cup B)^1$ [2]

(c) Find $n(A \cap B^1)$ [2]

(d) List all subsets of set $Q = \{7, 9\}$ [4]

10 You are given the distribution

5	5	4	2	7
8	3	7	9	3
8	6	4	4	7
7	5	4	7	6

(a) Copy and complete the table below.

Number	frequency
2	
3	
4	
5	
6	
7	
8	
9	
Total	

[3]

(b) Find,

(i) the mode [1]

(ii) the median [2]

(iii) the mean [4]

- 11 (a) Mrs Mdluli, a hawker, buys oranges, mangoes and bananas. Her fruits weigh in the ratio 2:3:5. If the total weight of her fruits is E120kg.
- (i) Calculate the mass of mangoes. [2]
- (ii) How much more do bananas weigh than oranges? [3]
- (b) Thandi and Zodwa share E100 in the ratio 2 : x .
- If Thandi's share is E40, calculate x . [3]