

UNIVERSITY OF ESWATINI  
FINAL EXAMINATION PAPER - 2019 : B.ED PRIMARY  
COURSE NUMBER : PED 100  
COURSE NAME : BASIC NUMERICAL SKILLS

TIME ALLOWED : 3 HOURS

TOTAL MARKS : 100

- INSTRUCTIONS
1. ALL QUESTIONS ARE **COMPULSORY**
  2. ANY PIECE OF MATERIAL WHICH IS NOT FOR MARKING PURPOSES MUST BE **CROSSED OUT** CLEARLY

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

1 Convert each of the following as indicated

(a)  $\frac{1}{8}$  as a percentage [2]

(b) 85% as a common fraction [2]

(c)  $12\frac{2}{3}\%$  as a common fraction [3]

(d) 45 500 mg to kg [2]

(e) 0.025 to a fraction in its lowest terms. [2]

2 (a) Simplify the following;

(i)  $3(a + 5b) - 2a - 8b$  [2]

(ii)  $(2x + y)(x + 3y)$  [2]

(iii)  $\frac{2x}{3} + \frac{x-2}{4}$  [3]

(b) Factorise the following

(i)  $24m - 36mn + 16my$  [2]

(ii)  $x^2 - 3x - 4$  [2]

3 Solve the following equations

(a)  $3 + \frac{2x}{5} = 9$  [3]

(b)  $\frac{x+2}{3} - \frac{2x-3}{2} = \frac{1}{6}$  [4]

(c)  $x^2 - 8x + 12 = 0$ . [3]

(d)  $x^2 - 2x = 15$  [4]

4 Work out the following

(a)  $7 + ^{-}4 - 5 \times ^{-}2$ , [2]

(b)  $2.03 \times 0.67$  [2]

(c)  $13.045 + 567.3 - 24.01$  [3]

(d)  $0.564 \div 0.03$  [3]

5 (a) list all the factors of 18 [3]

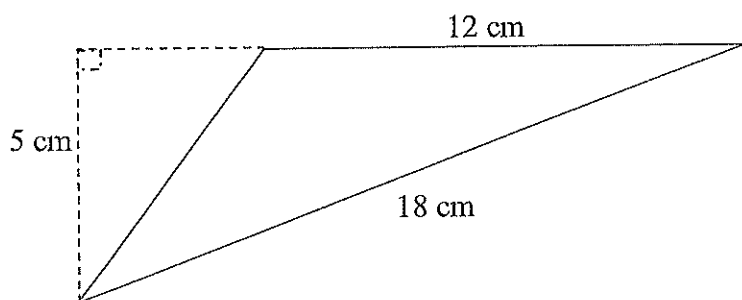
(b) Which of the following are prime numbers

1, 2, 3, 4, 5, 6, 7 [2]

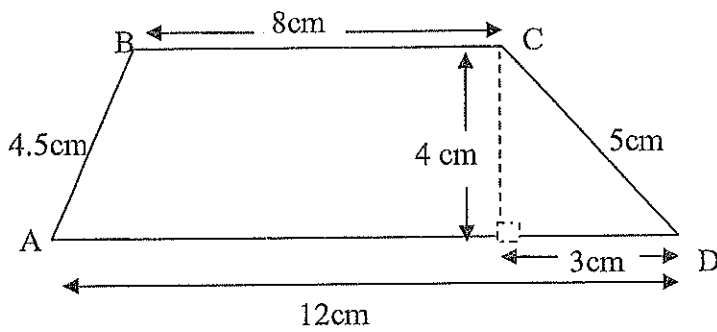
(c) List the first four triangle numbers [2]

(d) Express 140 as a product of its prime factors [3]

6 (a) Calculate the area of the triangle below. [2]



(b) The diagram below shows trapezium ABCD.



Calculate the area of the trapezium in

(i)  $\text{cm}^2$

[4]

(ii)  $\text{m}^2$ .

[3]

(c) You are given that the area of a rectangle is  $75 \text{ cm}^2$ . If its length is 10 cm and its width is  $(x + 5)$ .

Calculate the value of  $x$ .

[3]

(d) A man has 3 sons, aged 15 years, 12 years and 9 years. He divides E720 among them in the ratio of their ages.

Calculate the amount each one got.

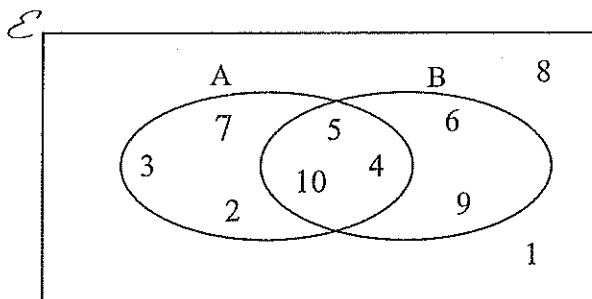
[6]

7 A distribution is given below which represents shoe sizes of some learners in a primary school.

Size	Frequency
6	3
7	6
8	14
9	10
10	7

- (a) How many learners were selected [2]
- (b) State the range of the distribution [1]
- (c) What was the modal size? [1]
- (d) Calculate the mean size [4]

8 You are given the Venn diagram below.



- (a) List the elements of the Universal set. [2]
- (b) Describe the Universal set in full. [2]
- (c) List
- (i)  $A^1 \cap B^1$  [2]
- (ii)  $A \cup B^1$  [2]
- (iii)  $A \cap B^1$  [2]
- (d) List all the subsets of the set  $\{4, 5, 10\}$ . [8]