

HARRISON COLLEGE

FIRST FORM MATHEMATICS

INTERNAL PROMOTION EXAMINATION 2014 – 2015



DURATION: 1 hour and 20 minutes

GENERAL INSTRUCTIONS TO CANDIDATES

1. This question paper consists of FOUR printed pages.
2. Write your name clearly on **EACH** sheet of paper used.
3. **ALL** questions are to be attempted.
4. Number your responses carefully and identically (including any associated parts) as they appear on the question paper.

**DO NOT** write ANY of your responses beside each other.

5. Calculators are **NOT** allowed.
6. The maximum mark for this examination is 45.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

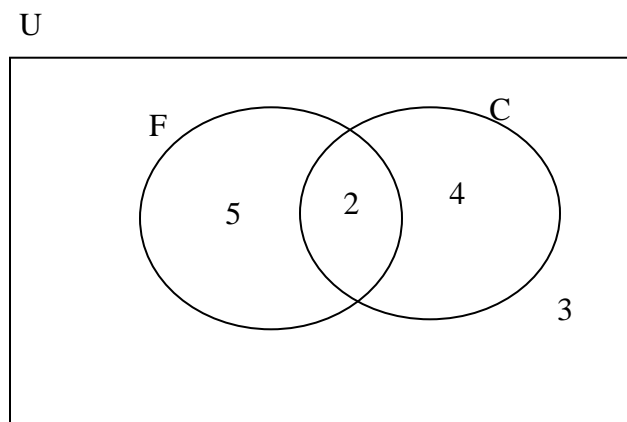


10. Jamar mowed  $\frac{5}{9}$  of a lawn. Sonia mowed  $\frac{1}{3}$  of the same lawn. What fraction of the lawn remains to be mowed?
- A)  $\frac{8}{9}$                       B)  $\frac{1}{9}$                       C)  $\frac{2}{3}$                       D)  $\frac{4}{9}$
- 

11. What is the value of  $a(b - c)$  when  $a = -2, b = 3$  and  $c = -3$ ? [2]

12. A total of 30000 tickets were sold for a concert. Of this amount,  $\frac{1}{4}$  were sold for \$150 each,  $\frac{1}{3}$  for \$100 each and the remainder for \$75 each. How many tickets were sold at \$75 each? [3]

13.



In the Venn diagram above

$U = \{\text{students who play games}\}$

$C = \{\text{students who play cricket}\}$

$F = \{\text{students who play football}\}$

The **number** of students in each case is indicated.

- a) How many students play neither cricket nor football? [1]
- b) Determine  $n(F \cup C)$ . [1]
- c) Determine  $n(F \cap C)'$ . [2]

14. i) The marked price of a laptop is \$1200. How much will it cost if there is a 20% discount for cash? [2]

ii) A washing machine can be bought on hire purchase for a deposit of \$768 plus 12 monthly payments of \$74 each. What is the total hire purchase price? [3]

iii) When the price of a dress is reduced by 12%, it is sold for \$2156. What is the original price? [3]

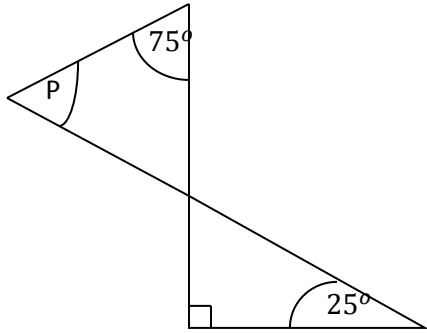
15. Solve the following equations:

a)  $5x - 10 = 3x + 12$  [2]

b)  $6 - 2y = 4y - 12$  [2]

c)  $3z - 22 = 7$  [2]

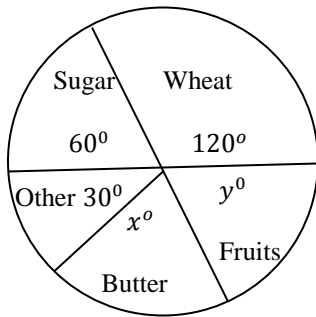
16.



Determine the size of the angle labeled P.

[3]

17.

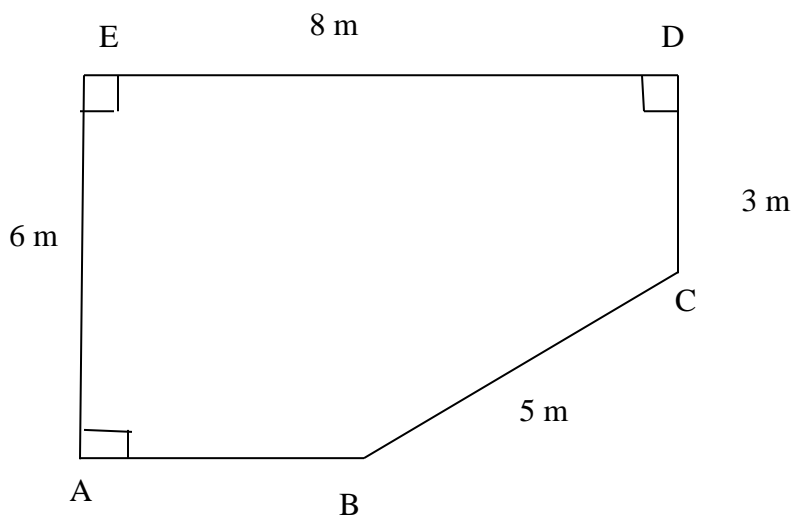


The pie chart represents the masses of ingredients in a cake. The total mass is 240g.

a) What is the value of  $x + y$ ? [2]

b) What is the combined mass (in grams) of fruits and butter? [2]

18.



ABCDE is a pentagon. AB is half of ED.

Calculate:

a) The perimeter of the pentagon. [2]

b) The area of the pentagon. [3]