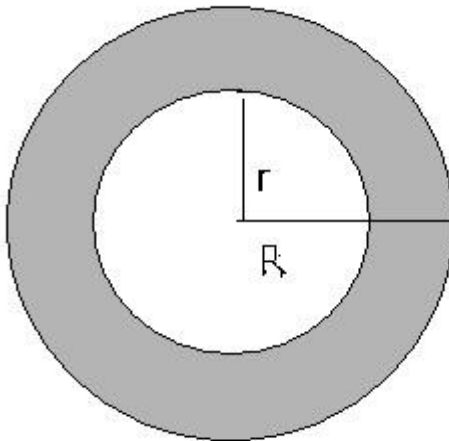


SENIOR ONE MATHEMATICS HOLIDAY WORK TERM 1 2014

ATTEMPT ALL NUMBERS

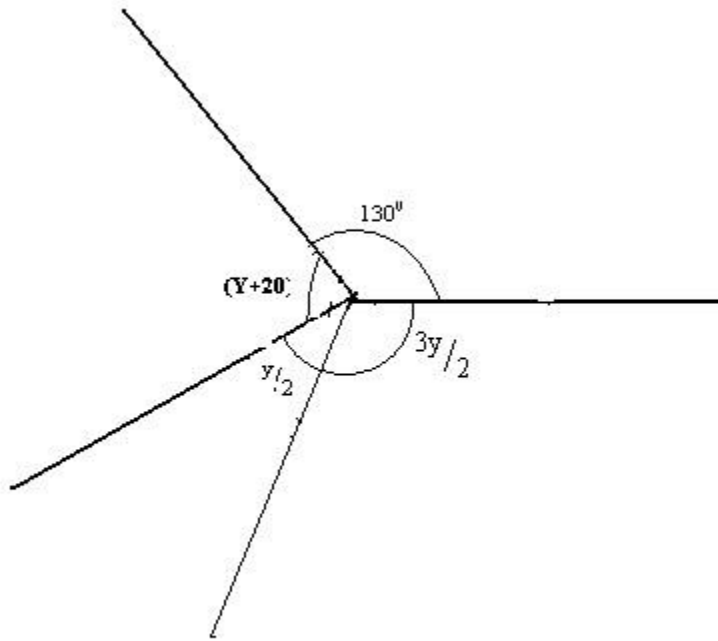
TIME:1½ HOURS

1. Given that $24_{\text{eight}} + 32_{\text{five}} = 101_n$, Determine the base n .
2. Find the lowest common multiple of 28, 42, and 56.
3. (i) Express 784 as a product of its prime factors.
(ii) Hence find the square root of 784.
4. Below is the figure of two circles with radii 5cm and 14cm according to their size respectively.



(Taking $\pi = \frac{22}{7}$), find the area of the shaded part .

5. Shillings 72,000 is shared among, Aisha, James and Joan in the ratio 2:3:4. find;
 - (i) how much each gets
 - (ii) the difference between Aisha's and Joan's share.



- 6 In the figure below, find the value of y .
- 7 A and B are two sets of the subjects such that $n(A \cap B) = 5$, $n(B) = 8$, $n(A \cup B) = 3$ and $n(A) = 12$.
Find;
(i) $n(A \cup B)$. (ii) $n(A \cap B)$ (iii) $n(\Sigma)$.
- 8 Calculate the simple interest on sh 96000 in 3 years at a rate of 12% per annum.
- 9 The following are marks obtained by 10, S.1 students in a Thursday weekly mathematics Test. 12, 40, 61, 10, 28, 78, 12, 85, 52, 08
Find;
a) The mean mark
b) The mode.
c) The range.
- 10 Draw Venn diagrams to represent the pair of sets below;
i. $P = \{3, 5, 7\}$ and $Q = \{1, 2, 3, 5, 7, 9\}$. ii.
 $A = \{2, 4, 6, 8, 10\}$ and $B = \{4, 8, 12, 16\}$

HARD WORK PAYS