Solution Sheet 9, May 28, 2012

Answers

1.

$$\frac{20 \times \frac{66}{100} + 30 \times \frac{56}{100}}{50} = \frac{3}{5} = 60\%$$

2. Expand $(1 + x + x^2 + x^3)^5$ and take the coefficient of x^{12}

3. (a) Each slice of the clock is 30. Hence $\angle XOY = 30n$ for $n = 0, 1, \cdots 11$. Triangle XYO is isosceles, so $\angle XYO = \angle YXO = \frac{180 - 30n}{2}$.

   (b) Let r be the \