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| **Question 1:**  In the figure shown, if AD=BD and AE=EC, what is y+z in terms of x? |
| **Option A:**  90+x |
| **Option B:**  90-x |
| **Option C:**  90-x/2 |
| **Option D:**  90+x/2 |
| **Correct Option:**  **C** |
| **Solution**  As AD=BD => ∠DBA = ∠DAB = y  and AE = EC => ∠EAC = ∠ECA = z  thus in ΔABC ∠A + ∠B +∠C = 180  (y+ x + z) + y + z = 180  2(y +z) = 180 – x  y + z = 90 – x/2 |
| **Level**  **4** |
| **Length**  **VSQ** |
| **Marks**  **1** |

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| **Question 2:**  An equilateral ΔABC is inscribed in a circle with centre O, then ∠BOC is equal to  New Doc 2018-03-23_7.jpg |
| **Option A:**  30° |
| **Option B:**  60° |
| **Option C:**  90° |
| **Option D:**  120° |
| **Correct Option:**  **D** |
| **Solution**  ΔABC is an equilateral triangle.  ∠BAC=60°  ∠BOC=120° (angle at the centre) |
| **Level**  **4** |
| **Length**  **VSQ** |
| **Marks**  **1** |

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| **Question 3:**  In the figure shown, O is the centre of the circle. If ∠OBC=37° and ∠BAC=x°, what is the value of x?  New Doc 2018-03-23_7.jpg |
| **Option A:**  53° |
| **Option B:**  74° |
| **Option C:**  111° |
| **Option D:**  148° |
| **Correct Option:**  **A** |
| **Solution**  **New Doc 2018-03-23_8.jpg**  ∠OBC = ∠OCB = 37° (∵ OB=OC)  ∠BOC = 180° - (37°+37°) = 106°  ∠BAC = x = ½(∠BOC) = ½(106°) = 53° |
| **Level**  **4** |
| **Length**  **VSQ** |
| **Marks**  **1** |