4. Alex draws a scalene triangle. One of the angles is 80°.
Which of the following could be the difference between the other two angles in Alex's triangle?

A 0° B 60° C 80° D 100° E 120°

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4. **C** One angle in Alex's triangle is 80°. Let $\alpha°$ be the smaller of the other two angles so $(100 - \alpha)°$ is the third angle. The difference between these angles is then $(100 - 2\alpha)°$. Considering each option:
A: $100 - 2\alpha = 0$ gives both α and $100 - \alpha$ to be 50. This triangle is therefore isosceles and not scalene.
B: $100 - 2\alpha = 60$ gives α to be 20 and $100 - \alpha$ to be 80. This is again isosceles.
Option D gives angles of 80, 0 and 100. Option E gives angles of 80, −10 and 110. Neither of these cases forms a triangle.
C: $100 - 2\alpha = 80$ gives α to be 10 and $100 - \alpha$ to be 90. All three angles are different so this is the correct option.