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| **P, Q and R are points on the circumference of a circle, centre, O.** **The straight line POS has been drawn to help you.** **Prove that Angle QOR is twice the size of angle QPR** | **Prove that** | **Prove algebraically that the sum of the squares of any two consecutive odd numbers cannot be a multiple of 4.** |
| **Prove that is a multiple of 8 for all integer values of n.** | **Prove algebraically that the difference between the squares of any two consecutive even numbers is always a multiple of 4.** | **Prove that the product of any two odd numbers is always odd.** | **How can you represent the following algebraically?**1. **Two consecutive numbers**
2. **Two odd numbers**
3. **Two consecutive odd numbers**
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| **How can you represent the following algebraically?**1. **An even number**
2. **An odd number**
3. **A multiple of 3**
 | **Jordan thinks that the sum of any 3 consecutive numbers is always a multiple of 3.****Test to see if she is right.****Now prove it.** | **PR and QS are two chords of a circle that meet at the point T.****Prove that triangles PTS and QTR are similar.****Given that PT = 3cm, TR = 8cm, and QT = 4cm, calculate the length ST.** |