
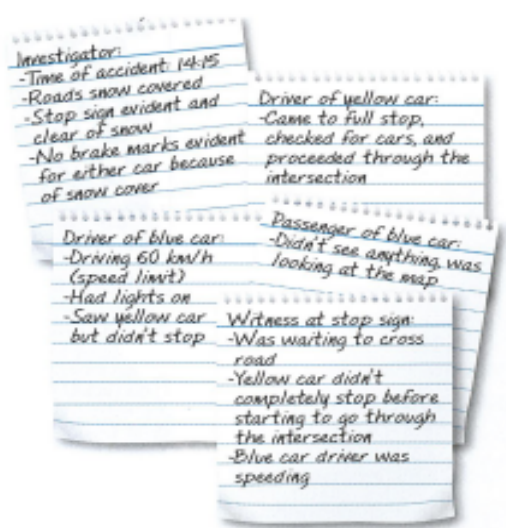


<p><b>Q.1.</b></p> <p>Step. 1. Choose an integer (even or odd)                  Step. 2. Multiply by 4                  Step. 3. Add 1                  Step. 4. Observe the pattern                  Step. 5. Make a conjecture.</p>	<p>First Example</p>	<p>Second Example</p>	<p>Pattern &amp; Conjecture</p>
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<p><b>Q.2.</b></p> <p>Make a conjecture about the sum of the measures of the angles in a pentagon.</p>	<p>First Example</p>	<p>Second Example</p>	<p>Pattern &amp; Conjecture</p>
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<p><b>Q.3.</b></p> 	 <p><i>Investigator:</i></p> <ul style="list-style-type: none"> <li>-Time of accident: 14:15</li> <li>-Roads snow covered</li> <li>-Stop sign evident and clear of snow</li> <li>-No brake marks evident for either car because of snow cover</li> </ul> <p><i>Driver of blue car:</i></p> <ul style="list-style-type: none"> <li>-Driving 60 km/h (speed limit)</li> <li>-Had lights on</li> <li>-Saw yellow car but didn't stop</li> </ul> <p><i>Passenger of blue car:</i></p> <ul style="list-style-type: none"> <li>-Didn't see anything, was looking at the map</li> </ul> <p><i>Driver of yellow car:</i></p> <ul style="list-style-type: none"> <li>-Came to full stop, checked for cars, and proceeded through the intersection</li> </ul> <p><i>Witness at stop sign:</i></p> <ul style="list-style-type: none"> <li>-Was waiting to cross road</li> <li>-Yellow car didn't completely stop before starting to go through the intersection</li> <li>-Blue car driver was speeding</li> </ul>	<p>Make a conjecture about what caused the accident?</p>	<p>What evidences support your conjecture?</p>
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Q.4. Use deductive reasoning (and distributive property) to prove  $(a - b)(a + b) = a^2 - b^2$ .

Q.5. Use deductive reasoning (and distributive property) to prove that the product of two odd integer is always an odd integer.

Q.6. Use deductive reasoning to prove to prove that the sum of any three consecutive integers is 3 times the median.

Q.7. Give an example of deductive reasoning from real life.