Course: Geometry

Topic: Semester A Exam Review: Part 3

Subtopics: Angle addition postulate, substitution property of equality, Subtraction property of equality, and Using the definition of right angles.

Document: **LIVE Stream 1**

Reference Number: **2049-12**

https://youtube.com/c/MrMattTheTutor

1) Create a two-column proof to justify the following statements using the given information:
   a. Given: The measure of angle ABC is 120 degrees.
      Point D is on the interior of angle ABC
      Angle ABD is 2X degrees
      Angle DBC is 3X degrees

      Prove: The measure of angle DBC is 72 degrees

2) Create a two-column proof to justify the following statements using the given information:
   a. Given: Angle ABC is a right angle.
      Point D is on the interior of angle ABC
      Angle ABD is 4X degrees
      Angle DBC is X degrees

      Prove: The measure of angle ABD is 72 degrees

3) Create a two-column proof to justify the following statements using the given information:
   b. Given: Angle ABC is a right angle.
      Point D is on the interior of angle ABC
      Angle ABD is 4X degrees
      Angle DBC is 2X degrees

      Prove: The measure of angle DBC is 30 degrees

4) Create a two-column proof to justify the following statements using the given information:

   c. Given: ABC is a straight line.
      Point D is on the interior of angle ABC
      Angle ABD is 7X degrees
      Angle DBC is 5X degrees

      Prove: The measure of angle ABD is 105 degrees

5) Create a two-column proof to justify the following statements using the given information:

   d. Given: ABC is a straight line.
      Point D is on the interior of angle ABC
      Angle ABD is 6X degrees
      Angle DBC is 2X degrees

      Prove: The measure of angle ABD is 135 degrees

6) Create a two-column proof to justify the following statements using the given information:

e. Given: ABC is a straight line.
Point D is on the interior of angle ABC
Angle ABD is 17X degrees
Angle DBC is 7X degrees

Prove: The measure of angle ABD is 127.5 degrees