Pairs of angles

A. Choose the correct answer:

1. If two angles are supplementary and one is 70°, the other is

a) 110° b) 100°

c) 90° d) 80°

2. Two angles are said to be complementary if their sum is

a) 180° b) 90°

c) 60° d) 360°

3. Which of the following pairs are supplementary?

a) 40° and 50° b) 60° and 30°

c) 90° and 90° d) 120° and 60°

4. If two angles form a linear pair, then they are

a) equal b) complementary

c) supplementary d) adjacent and complementary

5. Vertically opposite angles are always

a) unequal b) supplementary

c) adjacent d) equal

B. Write the Missing Terms to Complete the Sentences:

1. Two angles whose sum is 180° are called _____ angles.
2. Complementary angles add up to _____ degrees.
3. A linear pair of angles is always _____.
4. Vertically opposite angles are formed when two lines _____.
5. The angles 35° and 55° form a _____ pair.

C. Mark each sentence with a True (✔) or False (✗):

1. All complementary angles are equal. _____
2. Supplementary angles always form a straight line. _____

3. Vertically opposite angles are equal in measure. _____
4. Two angles forming a linear pair must be adjacent. _____
5. Complementary angles can be more than 90° each. _____

D. Figure out the answers to these questions:

1. Name a pair of supplementary angles whose difference is 30°.
2. Two complementary angles differ by 10°. Find the angles.
3. Draw two intersecting lines and label vertically opposite angles.
4. If one angle of a linear pair is 3x and the other is x, find the value of x.
5. Two adjacent angles form a straight angle. If one is 78°, find the other and name the pair.

E. Challenge yourself with these questions:

1. Find two angles that are supplementary and one is three times the other.
2. Construct two angles that are complementary and label them.
3. If two angles form a linear pair and one is 65°, find the other.
4. Explain why vertically opposite angles are always equal using a diagram.
5. Name and classify the pair of angles formed by the hands of a clock at 3 o'clock.

F. Observe the given figure and answer the following questions:-

A. Is ∠ 1 adjacent to ∠2?

B. Is ∠AOC adjacent to ∠AOE?

C. Do ∠COE and ∠EOD form a linear pair?

D. Are ∠BOD and ∠DOA supplementary?

E. Is ∠1 vertically opposite to∠4?

F. What is the vertically opposite angle of ∠5?