

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

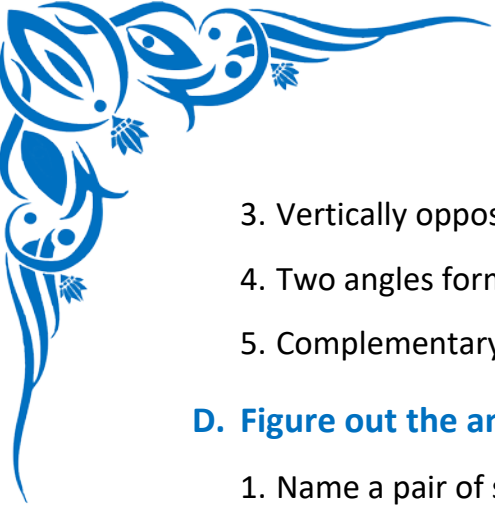
- a) unequal
- b) supplementary
- c) adjacent
- d) equal

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 (X):

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 $\angle 1$ adjacent to $\angle 2$?
- B. Is $\angle AOC$ adjacent to $\angle AOE$?
- C. Do $\angle COE$ and $\angle EOD$ form a linear pair?
- D. Are $\angle BOD$ and $\angle DOA$ supplementary?
- E. Is $\angle 1$ vertically opposite to $\angle 4$?
- F. What is the vertically opposite angle of $\angle 5$?

