

Complementary & Supplementary Angles

Complementary :- A pair of angles are called complementary to each other if the sum of their measures is 90° .

Ex :- $(30^\circ, 60^\circ) \Rightarrow 30^\circ + 60^\circ = 90^\circ$

$(25^\circ, 65^\circ) \Rightarrow 25^\circ + 65^\circ = 90^\circ$

To find the complementary angle of a given angle, subtract the measure of the angle from 90° .

Ex Complementary angle of 28°
 $\Rightarrow 90^\circ - 28^\circ = 62^\circ$

Complementary angle of 48°
 $\Rightarrow 90^\circ - 48^\circ = 42^\circ$

Supplementary angles :- A pair of angles are called supplementary to each other if the sum of their measures is 180° .

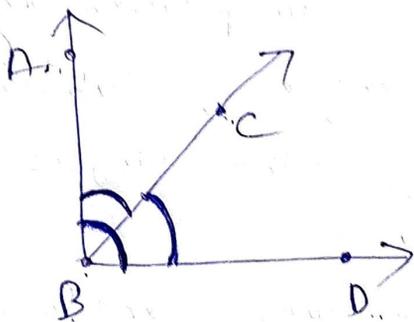
Ex :- $(100^\circ, 80^\circ) \Rightarrow 100^\circ + 80^\circ = 180^\circ$

$(120^\circ, 60^\circ) \Rightarrow 120^\circ + 60^\circ = 180^\circ$

To find the supplementary angle of a given angle, subtract the measure of the angle from 180° .

Ex :- Supplementary of 135°
 $\Rightarrow 180^\circ - 135^\circ = 45^\circ$

Q Name all the angles in the given figure :-



\Rightarrow There are 3 angles.

$\angle ABC, \angle CBD, \angle ABD$

Homework

- 1) A _____ has one end point
- 2) A _____ has no end point
- 3) The measure of a right angle is _____

4) Which of the following pairs are complementary:

a) $20^\circ, 30^\circ$

b) $10^\circ, 80^\circ$

c) $70^\circ, 20^\circ$

5) Which of the following pairs are supplementary:

a) $110^\circ, 60^\circ$

b) $170^\circ, 10^\circ$

c) $30^\circ, 150^\circ$

6) Write the measure of the complementary angles of:

a) 10°

b) 27°

c) 85°

7) Write the measure of the supplementary angles of:

a) 115°

c) 121°

d) 22°

8) Write all the angles in the given figure:-

