Complementary and Supplementary Regents Questions:

1) Find the degree measure of the complement of an angle whose degree measure is:
  - a) 50
  - b) 27
  - c) 83)
  - d) 19.5
  - e) 68
  - f) x
  - g) 2c
  - h) 90 – k
  - i) x + 10
  - j) x – 30

2) Find the degree measure of the supplement of an angle whose degree measure is:
  - a) 50
  - b) 27
  - c) 83
  - d) 78
  - e) 143.5
  - f) x
  - g) 2c
  - h) 180 – n
  - i) x + 30
  - j) y – 80

3) The measure of an angle is equal to the measure of its complement. Find the degree measure of its complement.

4) Two angles are complementary. The measure of the larger angle is five times the measure of the smaller angle. Find the degree measure of the larger angle.

5) Find the measure of an angle whose measure is 60 degrees more than the measure of its complement.

6) Two angles are complementary, and the degree measure of the smaller angle is 50 less than the degree measure of the larger. Find the degree measure of the larger angle.

7) The measures of two angles that are complementary are in the ratio 7:2. Find the degree measure of each angle.

8) The measure of the complement of an angle exceeds the measure of the angle by 24 degrees. Find the degree measure of the angle.

9) The degree measure of an angle and the degree measure of its supplement are equal. Find the degree measure of each angle.

10) Two angles are supplementary. The measure of the smaller angle is ½ the measure of the larger angle. Find the degree measure of the larger angle.

11) The measure of the supplement of an angle is 60 degrees more than twice the measure of the angle. Find the degree measure of the angle.

12) The difference between the degree measures of two supplementary angles is 80. Find the degree measure of the larger of the two angles.

13) The supplement of the complement of an acute angle is always
  - a) an acute angle
  - b) an obtuse angle
  - c) a straight angle
  - d) a right angle

14) Two angles that are both congruent and supplementary must be
       a) adjacent angles   b) acute angles
       c) right angles   d) complementary

15) If an acute angle varies so that its measure increases, the measure of its supplement
       a) increases   b) decreases
       c) remains the same   d) not enough information

16) If an acute angle varies so that its measure decreases, the measure of its complement
       a) increases   b) decreases
       c) remains the same   d) not enough information

17) If two adjacent angles have their non-common sides in the same straight line, they are always
       a) congruent   b) complementary
       c) supplementary   d) vertical

18) If the measure of two supplementary angles are in a ration of 4:5, the degree measure of the larger angle is
       a) 20   b) 80   c) 100   d) 120

19) If the measure of two complementary angles are in the ration of 1:5, the degree measure of the larger angle is
       a) 72   b) 75   c) 144   d) 150

20) If the complement of angle A is greater than the supplement of angle B, which statement must be true?

In 21 - 27, the statement will be true if the blank space is replaced by one of these three words: always, sometimes, or never. Select the word that will correctly complete the statement.

21) The complement of an angle is _____ an acute angle.
22) The supplement of an angle is _____ an obtuse angle.
23) The supplement of a right angle is _____ a right angle.
24) The complement of an angle is _____ an obtuse angle.
25) The supplement of an angle is _____ congruent to the complement of the angle.
26) If two angles have a common vertex, they are _____ adjacent angles.
27) If two angles are vertical, they are _____ adjacent angles.

28) Two supplementary angles measure x and 75 degrees. Find the measure of x.

29) Two complementary angles measure (2x + 10) and (x + 20) degrees. What are the value of x and each one of the angles?

30) Two supplementary angles measure (5x − 30) and (x + 90) degrees. Find the measure of x and each one of the angles.