Unit 1.1 Angles PRACTICE

Find (a) the complement and (b) the supplement of each angle.

1) 30°	2) 60°	3) 45°	4) 18°	5) 54°	6) 89°
(a) 60°	(a) 30°	(a) 45°	(a) 72°	(a) 36°	(a) 1°
(b) 150°	(b) 120°	(b) 135°	(b) 162°	(b) 126°	(b) 91°

Find the measure of each angle.
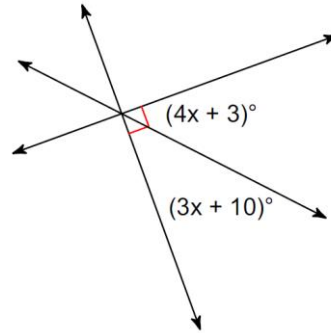
7)

8)

(4x + 3)°

(3x + 1)° (2x + 9)°

(3x + 10)°
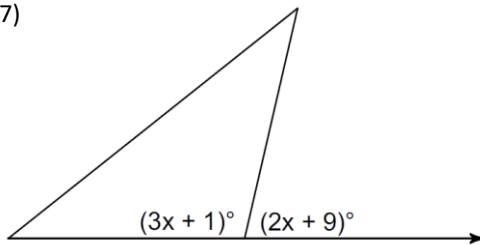
103°, and 77°   47°, and 43°

9) Supplementary angles with measures $10m + 7$ and $7m + 3$ degrees.
107°, and 73°

10) Supplementary angles with measures $6x - 4$ and $8x - 12$ degrees.
80°, and 100°

11) Complementary angles with measures $9z + 6$ and $3z$ degrees.
69°, and 21°

Answer each question.

12) If an angle measures $x°$, how can we represent its complement?
$(90 - x)°$

13) If an angle measures $x°$, how can we represent its supplement?
$(180 - x)°$

Perform each calculation.

14) $62° \ 18' + 21° \ 41'$	15) $75° \ 15' + 83° \ 32'$	16) $71° \ 18' - 47° \ 29'$
83°59'	158°47'	23°49'

17) $47° \ 23' - 73° \ 48'$	18) $90° - 51° \ 28'$	19) $180° - 124° \ 51'$
$-26°25'$	38°32'	55°9'

20) $90° - 72° \ 58'11"$	21) $90° - 36° \ 18' \ 47"$
17°1'49"	53°41'13"

Convert each angle measure to decimal degrees. Round to the nearest thousandth of a degree.

22) $20°54'$
    20.900°

23) $38° 42'$
    38.700°

24) $91° 35'54"$
    91.598°

25) $34°51'35"$
    34.860°

26) $274° 18'59"$
    274.316°

27) $165° 51'9"$
    165.853°

Convert each angle measure to degrees, minutes, and seconds.

28) $31.4296°$
    $31°25'47"$

29) $59.0854°$
    $59°5'7"$

30) $89.9004°$
    $89°54'1"$

31) $102.3771°$
    $102°22'38"$

32) $178.5994°$
    $178°35'58"$

33) $122.6853°$
    $122°41'7"$

Find the angle of smallest positive measure coterminal with each angle.

34) $-40°$
    320°

35) $-98°$
    262°

36) $-125°$
    235°

37) $-203°$
    157°

38) $539°$
    179°

39) $699°$
    339°

40) $850°$
    130°

41) $1000°$
    280°

Write an expression that generates all angles coterminal with each angle. Let n represent any integer.

42) $30°$
    $30° + n \cdot 360°$

43) $45°$
    $45° + n \cdot 360°$

44) $135°$
    $135° + n \cdot 360°$

45) $270°$
    $270° + n \cdot 360°$

46) $-90°$
    $-90° + n \cdot 360°$

47) $-135°$
    $-135° + n \cdot 360°$

48) Concept check:
Which two of the following are not coterminal with $r°$?

A) $360° + r°$

B) $r° - 360°$

C) $360° - r°$

D) $r° + 180°$

C and D