Secondary Math 3

Name Key

Unit 9 Analytical Trig Review

Date _____ Period ____

Find a positive and a negative coterminal angle for each given angle.

1) 30° $-330°, 390°$

2) −240° $-600°, 120°$

3) −220° $-580°, 140°$

4) −15° $-375°, 345°$

Find a coterminal angle between 0° and 360°.

5) 850° $130°$

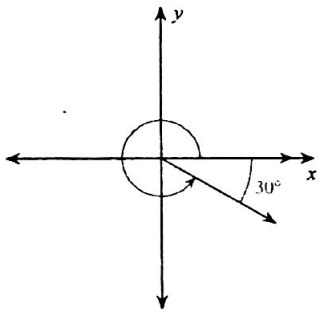
6) 505° $145°$

7) −84° $276°$

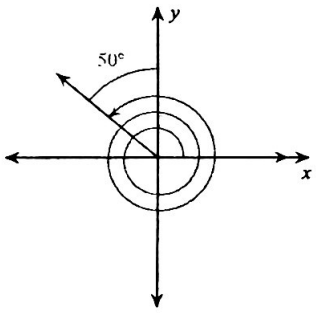
8) 685° $325°$

Find the measure of each angle.

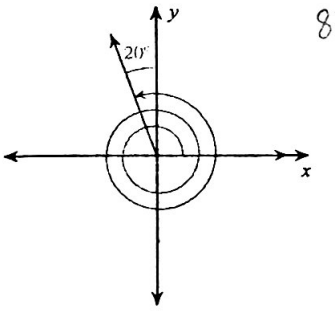
9) $330°$



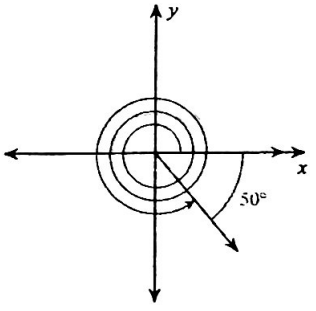
10) $860°$



11) $830°$

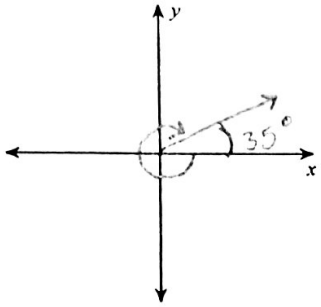


12) $1030°$

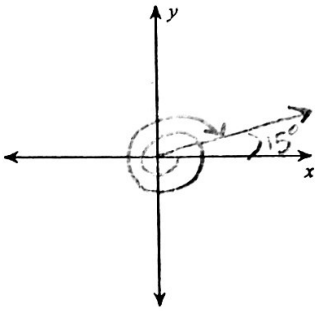


Draw an angle with the given measure in standard position.

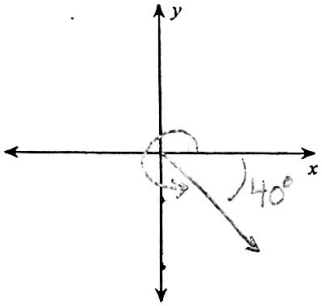
13) $-325°$



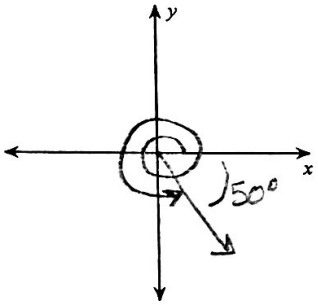
14) $-705°$



15) $320°$



16) $670°$



Convert each degree measure into radians and each radian measure into degrees.

17) $\frac{14\pi}{9}$ 280°

18) $\frac{11\pi}{6}$ 330°

19) $120°$ $\frac{2\pi}{3}$

20) $\frac{\pi}{4}$ 45°

21) $195°$ $\frac{13\pi}{12}$

22) $0°$ 0

Find the exact value of each trigonometric function.

23) $\tan -135°$

1

24) $\cos 210°$

$-\frac{\sqrt{3}}{2}$

25) $\cos -135°$

$-\frac{\sqrt{2}}{2}$

26) $\sin 180°$

0

27) $\tan -150°$

$\frac{\sqrt{3}}{3}$

28) $\sin 45°$

$\frac{\sqrt{2}}{2}$

29) $\tan -\frac{5\pi}{6}$ $\frac{\sqrt{3}}{3}$

30) $\sin \frac{5\pi}{3}$ $-\frac{\sqrt{3}}{2}$

31) $\cos \frac{\pi}{2}$ 0

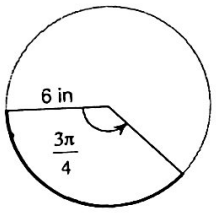
32) $\sin -\frac{2\pi}{3}$ $-\frac{\sqrt{3}}{2}$

33) $\sin \frac{4\pi}{3}$ $-\frac{\sqrt{3}}{2}$

34) $\cos -\frac{3\pi}{4}$ $-\frac{\sqrt{2}}{2}$

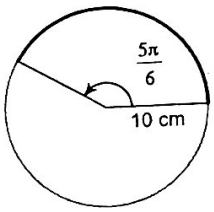
Find the length of each arc.

35)



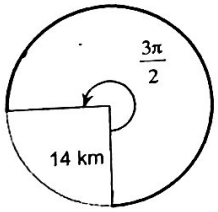
$\frac{9\pi}{2}$ in or 14.12 in

36)



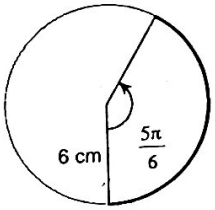
$\frac{25\pi}{3}$ cm or 26.12 cm

37)



21π km or 65.97 km

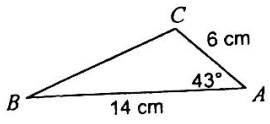
38)



5π cm or 15.71 cm

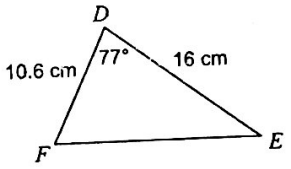
Find the area of each triangle to the nearest tenth.

39)



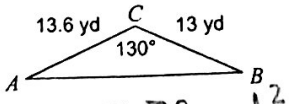
28.64 cm^2

40)



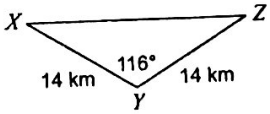
82.63 cm^2

41)



67.72 yd^2

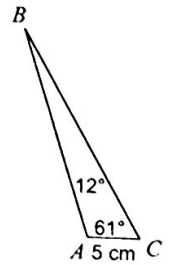
42)



88.08 km^2

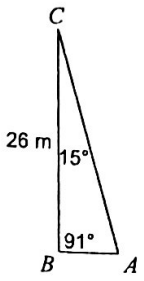
Find each measurement indicated. Round your answers to the nearest tenth.

43) Find AB



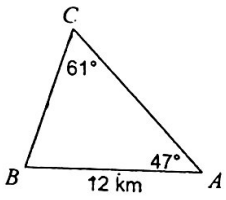
21 cm

44) Find AB



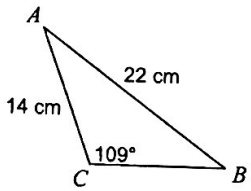
7 m

45) Find BC



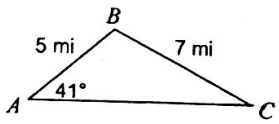
10 km

46) Find $m\angle B$



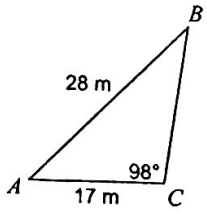
37°

47) Find $m\angle C$



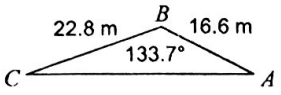
27.9°

48) Find $m\angle B$



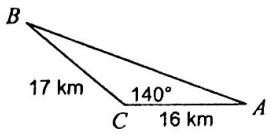
37°

49) Find AC



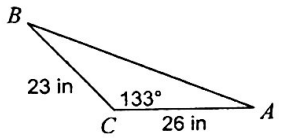
36.3 m

50) Find AB



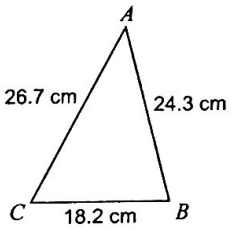
31 km

51) Find AB



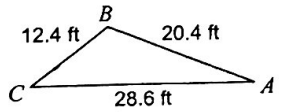
45 in

52) Find $m\angle C$



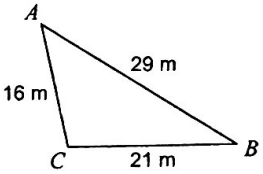
62.2°

53) Find $m\angle C$



38.4°

54) Find $m\angle A$



45°