AAT

HW 75

63. a) $\pi/6$

b) $\pi/4$

64. a) $7\pi/4$

b) $2\pi/3$

65. a) $\frac{-20}{180} = \frac{-2}{18} = -\frac{1}{9}$

$-\pi/9$

b) $\frac{-60}{180} = -\frac{6}{18} = -\frac{1}{3}$

$-\pi/3$

68. a) $-\frac{7\pi}{12}\left(\frac{180}{\pi}\right) = -105°$

b) $\frac{\pi}{9}\left(\frac{180}{\pi}\right) = 20°$

69. a) $\frac{5\pi}{4}\left(\frac{180}{\pi}\right) = 225°$

b) $-\frac{7\pi}{3}\left(\frac{180}{\pi}\right) = -420°$

70. a) $\frac{11\pi}{6}\left(\frac{180}{\pi}\right) = 330°$

b) $\frac{34\pi}{15}\left(\frac{180}{\pi}\right) = 408°$

71. $45°\left(\frac{\pi}{180}\right) = \frac{\pi}{4}$

72. $87.4\left(\frac{\pi}{180}\right) = 0.486\pi$

73. $-216.35\left(\frac{\pi}{180}\right) = -1.202\pi$

74. $-48.27\left(\frac{\pi}{180}\right) = -0.268\pi$

75. $532°\left(\frac{\pi}{180}\right) = 2.956\pi$

79. $\frac{\pi}{7}\left(\frac{180}{\pi}\right) = 25.714°$

80. $\frac{5\pi}{11}\left(\frac{180}{\pi}\right) = 81.818°$

81. $\frac{15\pi}{8}\left(\frac{180}{\pi}\right) = 337.5°$

82. $\frac{13\pi}{2}\left(\frac{180}{\pi}\right) = 1170°$

arc length

$S = r\theta$

94. $60°\left(\frac{\pi}{180}\right) = \pi/3$

$S = 9(\pi/3) = \boxed{3\pi \text{ ft}}$

95. $3(1) = \boxed{3\text{m}}$

96. $20(\pi/4) = \boxed{5\pi \text{ cm}}$

area

$\frac{1}{2}r^2\theta$

97. $\frac{1}{2}(6)^2(\pi/3) = \boxed{6\pi \text{ in}^2}$

98. $\frac{1}{2}(12)^2(\pi/4) = \boxed{18\pi \text{ mm}^2}$

99. $\frac{1}{2}(2.5)^2(1.25\pi) = \boxed{3.906\pi \text{ ft}^2}$