Advanced Algebra

Chapter 10 Assignment #9

Radian and degree measurement

1) Convert to radians in terms of π

a) 90° b) 60° c) 30° d)18° e) 9°

f)135° g)225° h)270° i) 360° j) 720°

k) 315° l) 540° m) 36° n) 80° o) 230°

2) Convert the following to radians. Your answer should be correct to 3 significant figures.

a) 36.7° b) 137.2° c) 317.9° d) 219.6° e) 396.7°

3) Convert the following radian measure to degrees:

a) $\frac{\pi}{5}$ b)$\frac{3\pi}{5}$ c)$\frac{3\pi}{4}$ d)$\frac{\pi}{18}$ e)$\frac{\pi}{9}$

f)$\frac{7\pi}{9}$ g)$\frac{\pi}{10}$ h)$\frac{3\pi}{20}$ i)$\frac{5\pi}{6}$ j)$\frac{\pi}{8}$

Find the intercepted arc length for each central angle given in degrees

1) $\vartheta = 30°$ and the r=12

2) $\vartheta = 45°$ and the r=8

3)) $\vartheta = 210°$ and the D=8

4) $\vartheta = 330°$ and the D=10

Use the formula S = r*$\boldsymbol{\theta}$ to find the intercepted arc length for each central angle given in radians

1) r = 8 and $\theta = \frac{5\pi}{4}$

2) r = 5.4 and $\theta = 2.5$

3) d = 10 and $\theta = \frac{5\pi}{6}$

4) d = 3 and $\theta = \frac{\pi}{12}$

5) r = 3 and $\theta = \frac{2\pi}{3}$

6) r = 1 and $\theta = 1$

7) d = 5 and $\theta = \frac{\pi}{6}$