King Fahd University of Petroleum and Minerals
Prep-Year Math Program
Math 002 - Term 142
Recitation (5.1)

Question1:

If α is of the complement of the angle $75° \ 34' \ 55''$ and β is the supplement of the angle $50° \ 16'$, then find the measure of the angle $\alpha + \beta$.

Answer: $\alpha + \beta = 4° \ 25' \ 5'' + 129° \ 44' = 143° \ 69' \ 5'' = 144° \ 9' \ 5''$

Question2.

a) Find the smallest positive angle coterminal with the angle $\theta = -1640°$.

b) Indicate the quadrant in which the angle $\theta = -2780°$ terminates.

Answer: **(a):** $160°$ **(b):** The angle $\theta = -2780°$ terminates in quadrant II.

Question3.

a)   Write $35.76°$ as DMS (Degree Minute Second) Format.

b)   Write $26° \ 12' \ 27''$ as decimal degree.

Answer: **(a):** $35° \ 45' \ 36''$ **(b):** $26.2075°$

Question4

Which one of the following is NOT coterminal with $20°$?

A) $-700°$

B) $380°$

C) $740°$

D) $340°$

E) $-340°$

Answer:

(d): It is **NOT** coterminal with $20°$ because their terminal sides do not coincide. The terminal side of $20°$ is in Quadrant I and the terminal side of $340°$ is in quadrant IV.

Question5 In a right triangle, one angle is $31° \ 42' \ 17''$, the other acute angle is:

A) $58° \ 17' \ 43''$

B) $58° \ 42' \ 17''$

C) $148° \ 17' \ 43''$

D) $58° \ 37' \ 48''$

E) $59° \ 18' \ 43''$

Answer: (a): $58° \ 17' \ 43''$