Topic: Converting between degrees and radians

Question: What is the measure, in radians, of the angle?

220°

Answer choices:

A $\frac{9}{11}\pi$

B $\frac{5}{4}\pi$

C $\frac{11}{9}\pi$

D $\frac{5}{6}\pi$

Solution: C

Since there are π radians in $180°$, we will multiply $220°$ by 1, written in the form $\pi/(180°)$:

$$220° = 220°(1)$$

$$220° = 220° \left(\frac{\pi}{180°} \right)$$

$$220° = \left(\frac{220}{180} \right) \pi$$

$$220° = \left(\frac{11}{9} \right) \pi$$

Topic: Converting between degrees and radians

Question: What is the measure, in degrees, of the angle?

$$-\frac{13}{8}\pi$$

Answer choices:

A -260°

B -292.5°

C -265.5°

D -290°

Solution: B

Since there are $180°$ in π radians, we will multiply $-(13/8)\pi$ by 1, written in the form $(180°)/\pi$:

$$-\frac{13}{8}\pi = -\frac{13}{8}\pi(1)$$

$$-\frac{13}{8}\pi = -\frac{13}{8}\pi\left(\frac{180°}{\pi}\right)$$

$$-\frac{13}{8}\pi = -\left[\frac{13(180)}{8}\right]°$$

$$-\frac{13}{8}\pi = -\left(\frac{2{,}340}{8}\right)°$$

$$-\frac{13}{8}\pi = -\left(\frac{585}{2}\right)°$$

$$-\frac{13}{8}\pi = -292.5°$$