p 218, q2

$\frac{\sqrt{3}}{2}$ is a know measurement. We look at the unit circle for answers

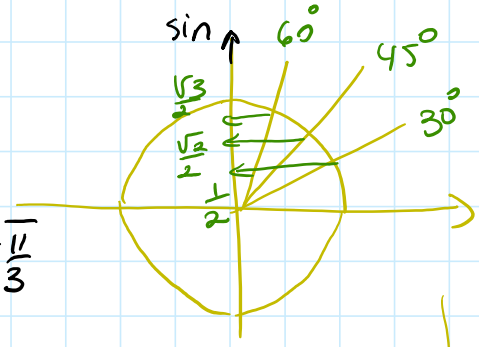

Figure 1

$\frac{\sqrt{3}}{2}$ is associated w/ $60° = \frac{\pi}{3}$

but we are looking for $-\frac{\sqrt{3}}{2}$ instead

which is a symmetric angle reflected into the x-axis

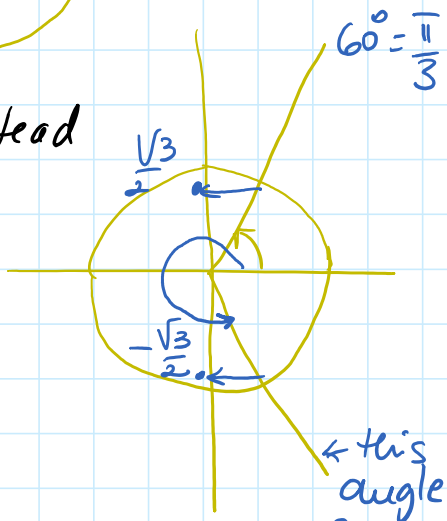

Figure 2

see the calculation on the right: $11\frac{\pi}{6} = 300°$

But this is not the only angle that produces a sin equal to $-\frac{\sqrt{3}}{2}$

here is the other angle:

what is the measurement of the red angle?

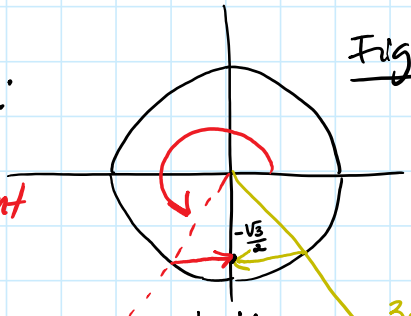

Figure 3

$300° = 11\frac{\pi}{6}$

both angles have a sin $= -\frac{\sqrt{3}}{2}$

Here is what

Here is what we know

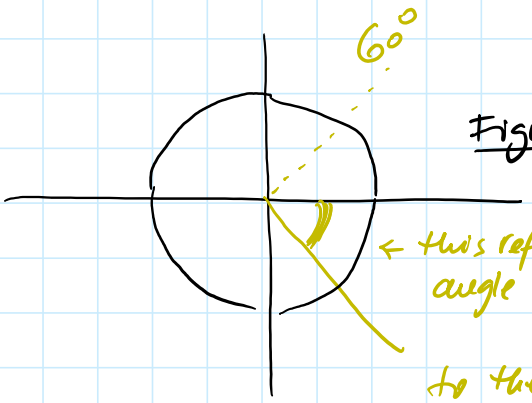

Figure 4

Our angle has a symmetric reference angle (in red) on the opposite side of the y-axis:

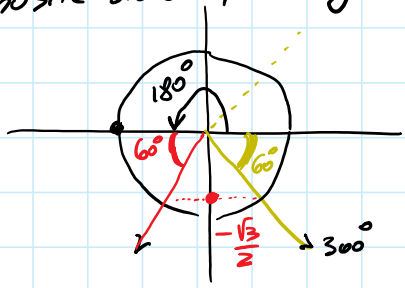

Figure 5

overall the angle we want (see Figure 6) is made of 180° and then 60°

$\therefore \quad 180° + 60° = 240°$

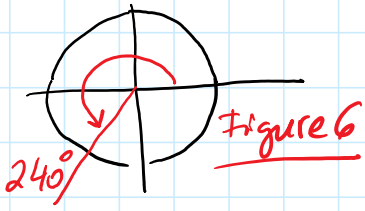

Figure 6

Thus the two angles that hv a sin value equal to $-\frac{\sqrt{3}}{2}$ are: 240° & 300° (Figure 2)

The answer is thus option C ✓