Part I: Multiple Choice. Place the correct answer in the corresponding blank at the end of this section.

1.   What is the best estimate for 120° in radians? $120 \times \dfrac{\pi}{180} = 2.1$

(A) 2.1   (B) 0.7

(C) 2.8   (D) 3.1

2.   What is the best estimate for 135° in radians? $135 \times \dfrac{\pi}{180} = \dfrac{3\pi}{4}$

(A) $\dfrac{3\pi}{2}$ (B) $\dfrac{3\pi}{4}$

(C) $\dfrac{3\pi}{8}$ (D) $\dfrac{2\pi}{3}$

3.   What is the best estimate for 0.1 radians in degrees?

(A) 0.5°   (B) 1° $0.1 \times \dfrac{180}{\pi} = 6$
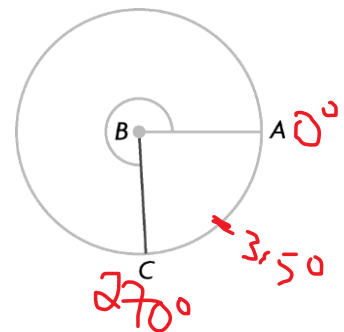
(C) 3°   (D) 6°

4.   What is the best estimate for $\dfrac{5\pi}{8}$ is degrees? $\dfrac{5\pi}{8} \cdot \dfrac{180}{\pi} = 112.5°$

(A) 112.5°   (B) 288°

(C) 900°   (D) 1440°

5.   What is the best estimate for the central angle in degrees?

(A) 263°   (B) 273°
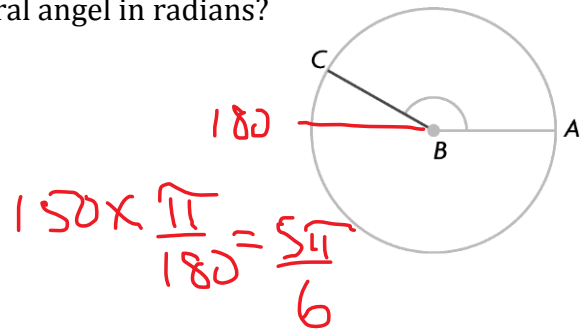
(C) 283°   (D) 293°

6.   What is the best estimate for the central angel in radians?

(A) $\frac{5\pi}{12}$

(B) $\frac{6\pi}{5}$
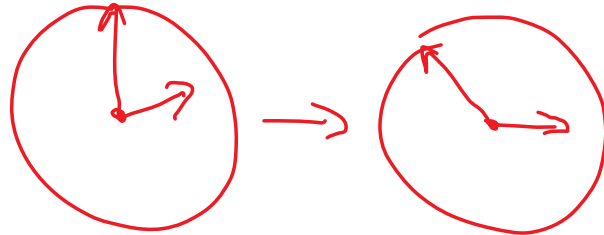
(C) $\frac{5\pi}{4}$

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

180

$150 \times \frac{\pi}{180} = \frac{5\pi}{6}$

[diagram of circle with center B, points A, C]

7.   Imagine that it is now 2 p.m. What time will it be when the minute hand has rotated through 300°?

(A) 2:40

(B) 2:50

(C) 3:00

(D) 3:10

[two clock diagrams with arrow]

8.   Imagine that it is now 2 p.m. What time will it be when the minute hand has rotated through $\frac{7\pi}{4}$ radians?

(A) 2:20

(B) 2:52
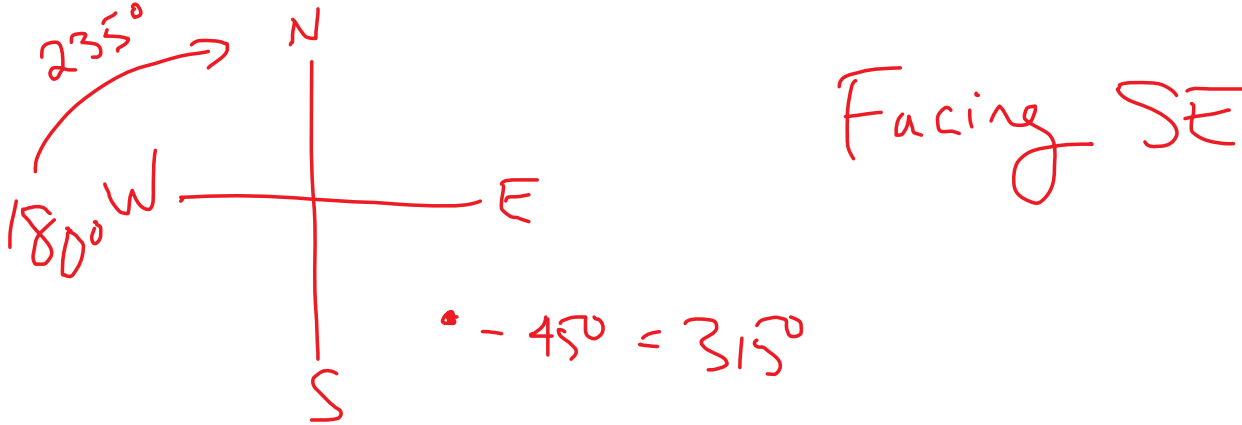
(C) 3:15

(D) 3:45

$\frac{7\pi}{4} \cdot \frac{180}{\pi} = 315°$

Part II: **Constructed Response. Answer each question in the space provided. Show all workings.**

9. Eddie is facing west. What direction will he be facing if he rotates 235° to his right?

$235°$

N

Facing SE

$180°$ W ——— E

$-45° = 315°$

S

10. For the following pair of angle measures, determine which is greater 75° or $\frac{1}{2}\pi$?

$$\frac{1}{2}\pi \times \frac{180}{\pi} = \frac{180}{2} = 90°$$

So $\frac{1}{2}\pi$ is greater.