Radians and degree conversion

6 questions | 18 marks

Equivalent correct methods earn the corresponding marks.

1. Convert 150° to radians. [3 marks]

$150\pi/180 = 5\pi/6$.

Answer: $5\pi/6$

2. Convert $-60°$ to radians. [3 marks]

$-60\pi/180 = -\pi/3$.

Answer: $-\pi/3$

3. Convert $11\pi/12$ radians to degrees. [3 marks]

$(11\pi/12)(180/\pi) = 165$.

Answer: 165°.

4. Convert 2.4 radians to degrees to one decimal place. [3 marks]

$2.4(180/\pi) = 137.5098\ldots$.

Answer: 137.5°.

5. Give one positive and one negative angle coterminal with $\pi/3$. [3 marks]

Add or subtract 2π.

Answer: $7\pi/3$ and $-5\pi/3$

6. A calculator gives $\sin 30 \approx -0.988$. Explain if the intended angle was 30°. [3 marks]

$\sin 30$ radians≈ -0.988, but $\sin 30° = 0.5$.

Answer: The calculator was in radian mode.