

**Section 2.1 Extra Practice**

1. Sketch an angle in standard position with each given measure.

- a)  $24^\circ$   
 b)  $104^\circ$   
 c)  $204^\circ$   
 d)  $304^\circ$

2. State the reference angle for each angle in standard position.

- a)  $55^\circ$   
 b)  $155^\circ$   
 c)  $255^\circ$   
 d)  $355^\circ$

3. Determine the measure of the three other angles in standard position,  $0^\circ < \theta < 360^\circ$ , that have a reference angle of

- a)  $40^\circ$   
 b)  $72^\circ$   
 c)  $88^\circ$   
 d)  $3^\circ$

4. Complete the table. Determine the measure of each angle in standard position given its reference angle and the quadrant in which the terminal arm lies.

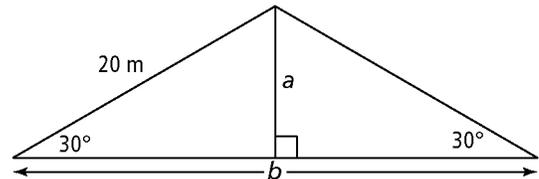
	Reference Angle	Quadrant	Angle in Standard Position
a)	$30^\circ$	II	
b)	$45^\circ$	III	
c)	$60^\circ$	IV	

5. Determine if the pair of angles have the same reference angle.

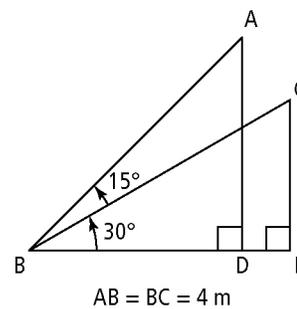
- a)  $50^\circ$ ,  $140^\circ$   
 b)  $200^\circ$ ,  $290^\circ$   
 c)  $216^\circ$ ,  $324^\circ$   
 d)  $91^\circ$ ,  $181^\circ$

6. Determine the exact value of each indicated side.

- a) side  $a$ , side  $b$



- b) DE



7. A clock has a minute hand that is 12 cm long. Determine the vertical distance of the tip of the minute hand between the times 8:05 a.m. and 8:25 a.m.

