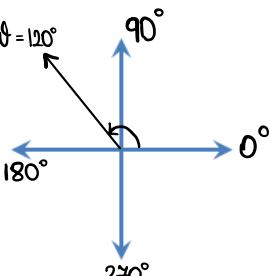
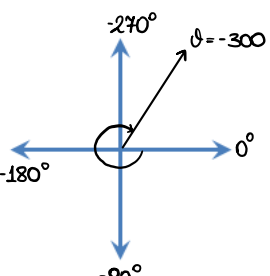
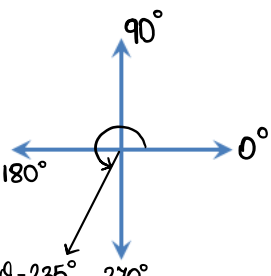
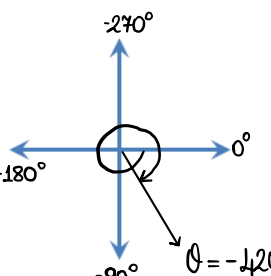
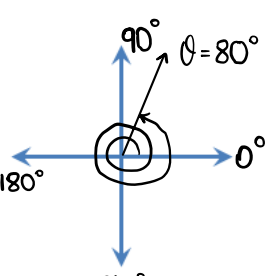
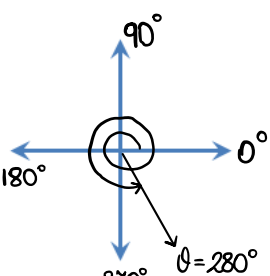
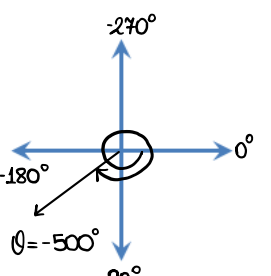
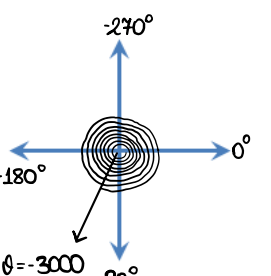


Pre-Calculus 11: Ch2 Trigonometry HW Lesson 2 Angles in Standard Position

1. Draw each angle in standard position then find the value of the reference angle:

a) 120°  Reference Angle: 60°	b) -300  Reference Angle: 60°	c) 235°  Reference Angle: 55°	d) -420°  Reference Angle: 60°
e) 800°  Reference Angle: 80°	f) 1000°  Reference Angle: 80°	g) -500  Reference Angle: 40°	h) -3000°  Reference Angle: 60°

2. Given each pair of angles, indicate whether if they are co-terminal. Show your work to justify your answer:

a) 35° , 695° $695 - 35 = 660$ $660 \div 360 = 1.8\bar{3}$ not co-terminal X	b) 900° , 330° $900^\circ - 330^\circ = 570^\circ$ $570 \div 360 = 1.58\bar{3}$ not co-terminal X	c) 720° , 1080° $1080^\circ - 720^\circ = 360^\circ$ $360 \div 360^\circ = 1$ co-terminal ✓
d) -475° , 605° $-475^\circ - 605^\circ = -1080^\circ$ $-1080^\circ \div 360^\circ = -3$ co-terminal ✓	e) -2590° , 290° $-2590^\circ - 290^\circ = -2880^\circ$ $-2880 \div 360 = -8$ co-terminal ✓	f) 1825° , 375° $1825 - 375 = 1450$ $1450 \div 360 = 4.02\bar{7}$ not co-terminal X

3. What does it mean that an angle is in standard position? Explain:

It's vertex is placed at the origin of a coordinate plane. It's initial side lies along the positive x-axis. //

4. What is the smallest positive co-terminal angle of 2000° ? Which quadrant is it in?

$$2000^\circ \div 360^\circ = 5.5$$

$$360^\circ \times 5 = 1800^\circ$$

$$2000^\circ - 1800^\circ = 200^\circ \rightarrow \text{Quadrant III} //$$

5. Give a general formula for all the co-terminal angles of -5200°

$$\alpha = -5200^\circ + 360^\circ k //$$

$$k \in \mathbb{Z}$$

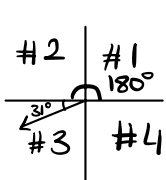
6. Write a general formula for all co-terminal angles of a) 75° b) -200°

$$\alpha = 75^\circ + 360^\circ k //$$

$$\theta = -200^\circ + 360^\circ k //$$

$$k \in \mathbb{Z}$$

7. An angle in quadrant 3 has a reference angle of 31° . If the angle is greater than 600° , then what is the smallest possible answer?



$$\alpha = 180^\circ + 31^\circ = 211^\circ$$

$$211^\circ + 360^\circ k > 600$$

$$360^\circ k > 389$$

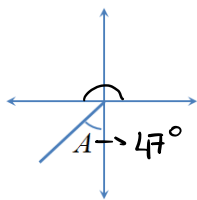
$$k > 1.0805$$

$$k=2$$

$$211^\circ + 360(2)$$

$$211^\circ + 720^\circ = 931^\circ //$$

8. Given that angle "A" is 47° , what is the value of the angle in standard position?



~ it is negative to the y-axis

$$\theta = 270^\circ - 47^\circ = 223^\circ //$$

9. Angle "x" is between 0° and 360° , and has a reference angle of 24° . What are all the possible values of angle "x"?

$$24^\circ$$

$$180^\circ - 24^\circ = 156^\circ$$

$$180^\circ + 24^\circ = 204^\circ$$

$$360^\circ - 24^\circ = 336^\circ //$$

$$24^\circ, 156^\circ, 204^\circ, 336^\circ //$$

[Signature]