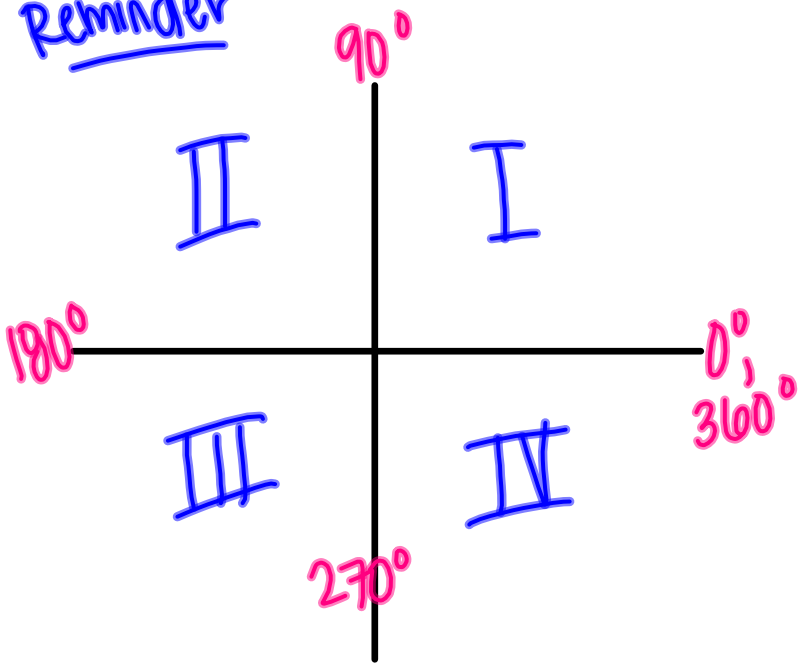
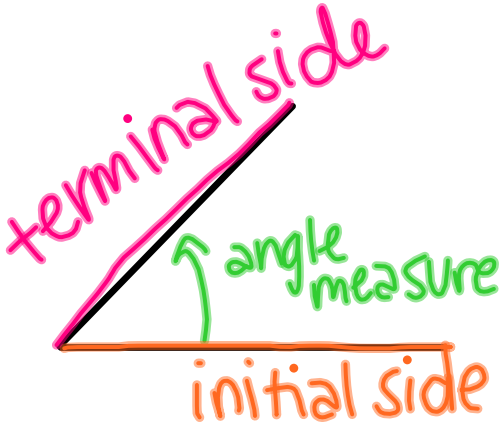
ANGLE MEASURE

ESSENTIAL QUESTION: How do I determine the reference angle of an angle in any quadrant?

Reminder



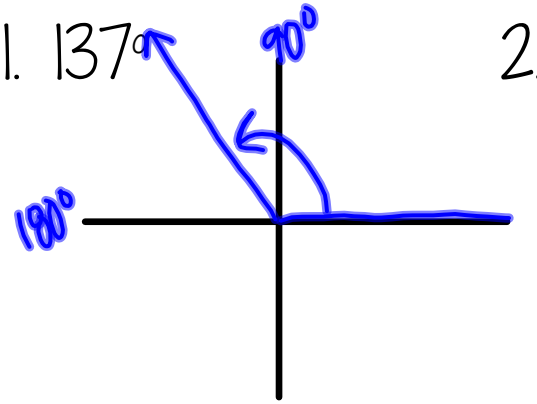


ANGLE MEASURE

ESSENTIAL QUESTION: How do I determine the reference angleof an angle in any quadrant?

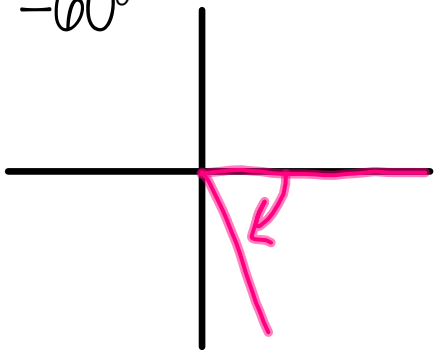
Sketch a graph of each angle.

1. 137°

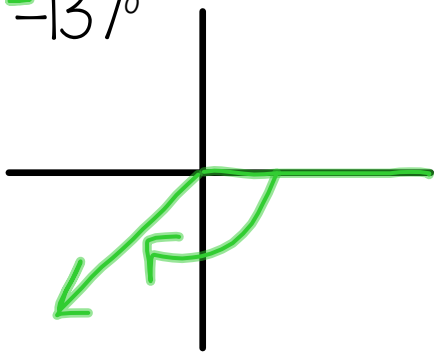


2. −60°

clockwise



3. −137°



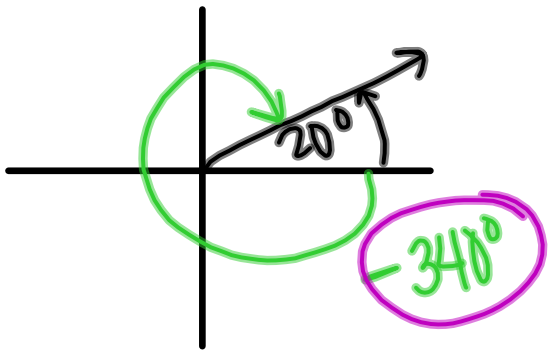
ANGLE MEASURE

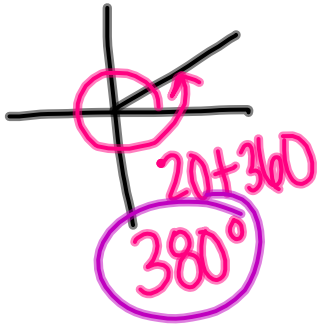
ESSENTIAL QUESTION: How do I determine the reference angleof an angle in any quadrant?

~~Coterminal~~ – ends in the same place as another angle

ex 4. Find 3 angles that are coterminal to 20°.

$\pm 360°$ as many times





ANGLE MEASURE

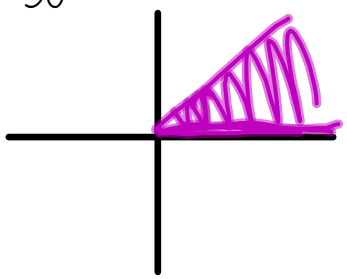
ESSENTIAL QUESTION: How do I determine the reference angleof an angle in any quadrant?

Reference Angles

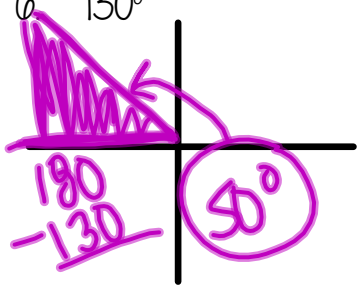
- Acute or 90°
- formed by terminal sideofanangle and the x-axis.
- Always positive.

Find the reference angle for each of the following.

5. 50°

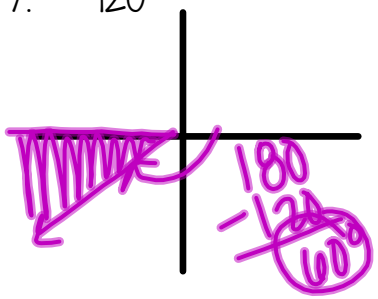


6. 130°



180
−130
50°

7. −120°

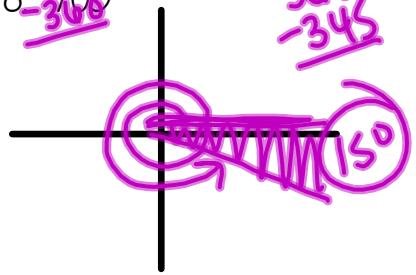


180
−120
60°

8. 705°

−360
345°

360
−345



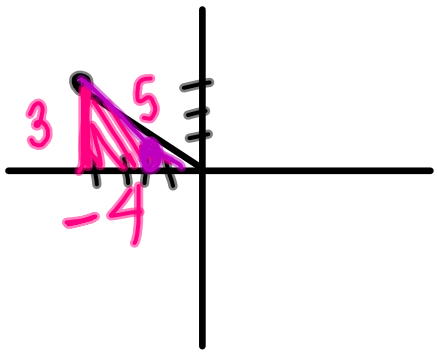
15°

ANGLE MEASURE

ESSENTIAL QUESTION: How do I determine the reference angleof an angle in any quadrant?

SOHCAHTOA

ex 9. Find the exact values of the six trig functions of an angle θ whose terminal side passes through the point $(-4, 3)$



$\sin\theta = \frac{3}{5}$ $\csc\theta = \frac{5}{3}$

$\cos\theta = \frac{-4}{5}$ $\sec\theta = -\frac{5}{4}$

$\tan\theta = \frac{3}{-4}$ $\cot\theta = \frac{-4}{3}$