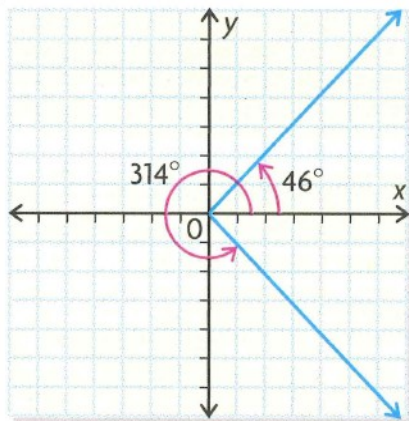
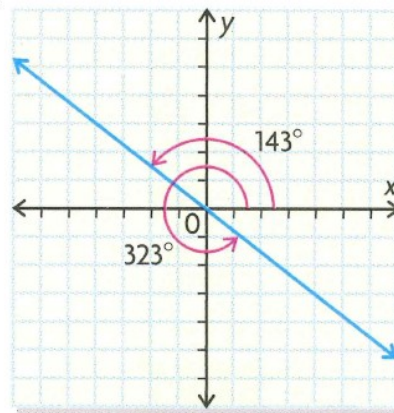
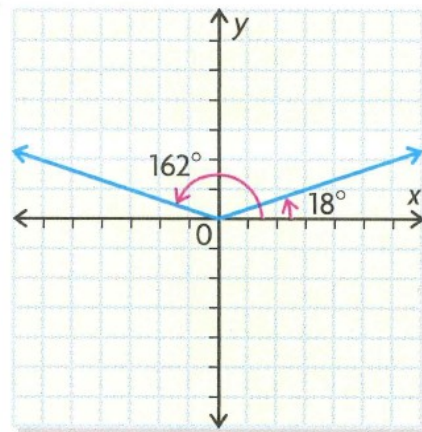
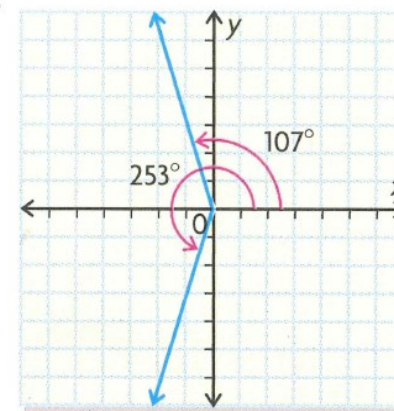
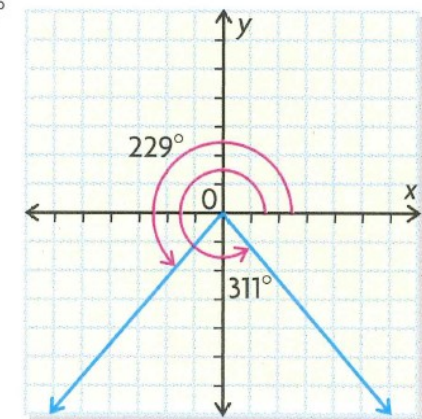


a) $46^\circ, 314^\circ$ b) $143^\circ, 323^\circ$ c) $18^\circ, 162^\circ$ d) $107^\circ, 253^\circ$ f) $229^\circ, 311^\circ$ 

2.a) Quadrant 2 and 3.

b)

$$Q2: \sin \theta = \frac{\sqrt{119}}{12}, \cos \theta = -\frac{5}{12}, \tan \theta = -\frac{\sqrt{119}}{5}$$

$$Q3: \sin \theta = -\frac{\sqrt{119}}{12}, \cos \theta = -\frac{5}{12}, \tan \theta = \frac{\sqrt{119}}{5}$$

c) 115° and 245°

3.a) Quadrant 1 and 3.

b)

$$Q1: \sin \theta = \frac{15}{\sqrt{306}}, \cos \theta = \frac{9}{\sqrt{306}}$$

$$Q3: \sin \theta = -\frac{15}{\sqrt{306}}, \cos \theta = -\frac{9}{\sqrt{306}}$$

c) 59° and 239°

4.a) Quadrant 3 and 4.

b)

$$Q3: \cos \theta = -\frac{\sqrt{279}}{20}, \tan \theta = \frac{11}{\sqrt{279}}$$

$$Q4: \cos \theta = \frac{\sqrt{279}}{20}, \tan \theta = -\frac{11}{\sqrt{279}}$$

c) 213° and 327°