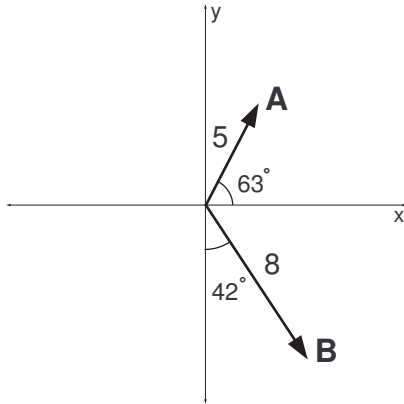
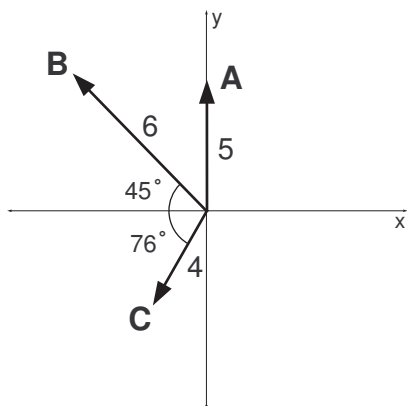


SHOW ALL WORK FOR FULL CREDIT — CIRCLE YOUR FINAL ANSWER

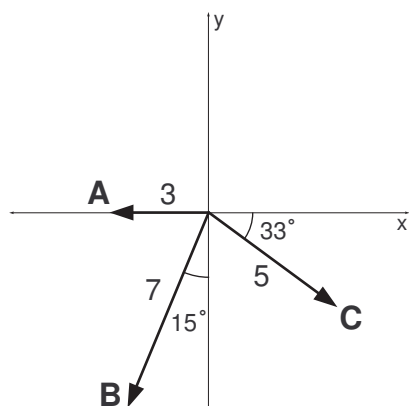
- Find the magnitude and standard position angle of the resultant vector **R**. Give final answers to two decimal places. To avoid round-off error, take any intermediate calculations to at least four decimal places. Note that the figure is not drawn to scale.



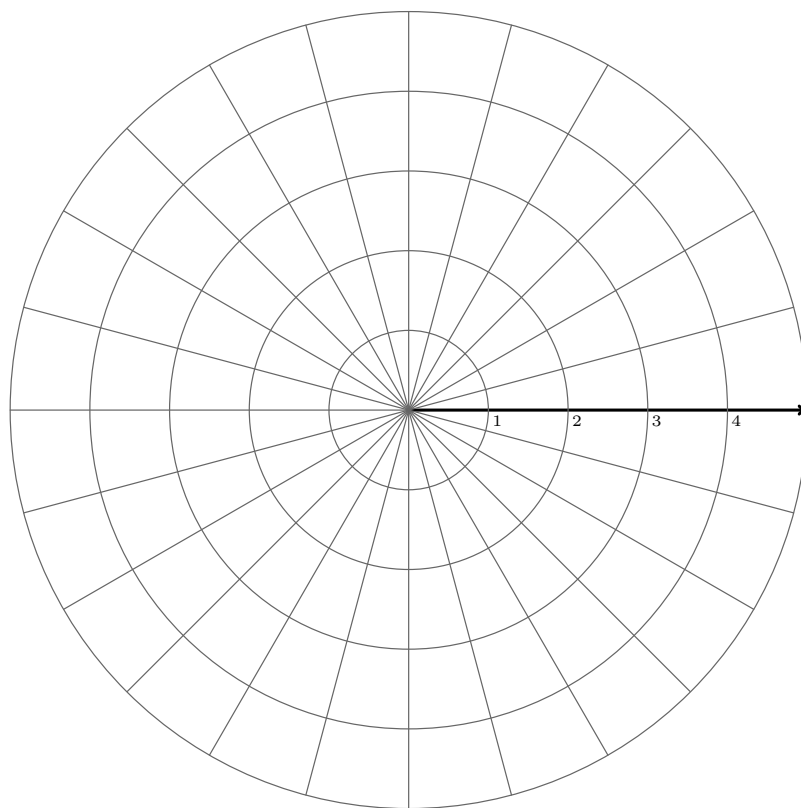
2. Find the magnitude and standard position angle of the resultant vector **R**. Give final answers to two decimal places. To avoid round-off error, take any intermediate calculations to at least four decimal places. Note that the figure is not drawn to scale.



3. Find the magnitude and standard position angle of the resultant vector **R**. Give final answers to two decimal places. To avoid round-off error, take any intermediate calculations to at least four decimal places. Note that the figure is not drawn to scale.



4. Plot the following points:



(a) $A = (4, 150^\circ)$

(f) $F = (2, -120^\circ)$

(b) $B = (-4, 120^\circ)$

(g) $G = (-4, -90^\circ)$

(c) $C = (3, -315^\circ)$

(h) $H = (0, 60^\circ)$

(d) $D = (-3, 30^\circ)$

(i) $I = (-2, -60^\circ)$

(e) $E = (3, 0^\circ)$

5. Find the rectangular coordinates of $(8, 235^\circ)$. Give answer to two decimal places.

6. Find polar coordinates for the following points. Give θ as a positive angle, accurate to two decimal places.

(a) $(5, 6)$

(b) $(-2, 5)$

7. Find the exact value of the following:

$$(a) \quad \tan \left[\sin^{-1} \left(\frac{\sqrt{3}}{2} \right) \right] =$$

$$(b) \quad \cos \left[\tan^{-1} \left(-\frac{1}{\sqrt{3}} \right) \right] =$$

$$(c) \quad \sin [\arctan(-\sqrt{3})] =$$

$$(d) \quad \tan \left[\arccos \left(-\frac{1}{2} \right) \right] =$$

$$(e) \quad \cos [\arcsin(0)] =$$

(f) $\cos \left[\arcsin \left(\frac{1}{6} \right) \right] =$

(g) $\tan \left[\cos^{-1} \left(-\frac{3}{4} \right) \right] =$

(h) $\sin [\tan^{-1} (-3)] =$

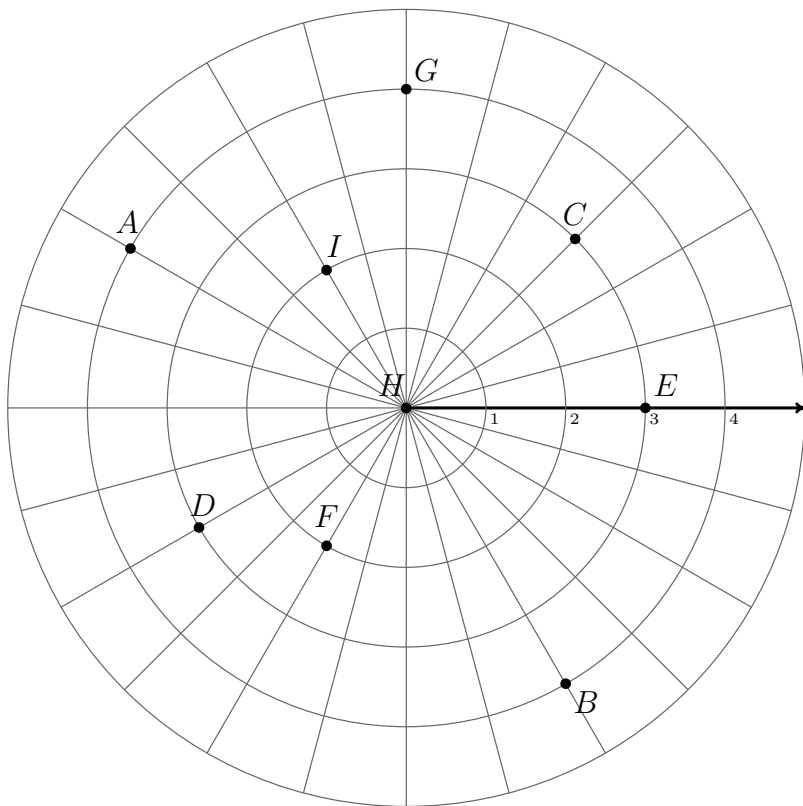
ANSWERS

1. $\|\mathbf{R}\| = 7.77; \theta = 348.94^\circ$

2. $\|\mathbf{R}\| = 7.48; \theta = 134.18^\circ$

3. $\|\mathbf{R}\| = 9.50; \theta = 266.27^\circ$

4.



5. $(-4.59, -6.55)$

(d) $-\sqrt{3}$

6. (a) $(\sqrt{61}, 50.19^\circ)$

(e) 1

(b) $(\sqrt{29}, 111.80^\circ)$

(f) $\frac{\sqrt{35}}{6}$

7. (a) $\sqrt{3}$

(b) $\frac{\sqrt{3}}{2}$

(g) $-\frac{\sqrt{7}}{3}$

(c) $-\frac{\sqrt{3}}{2}$

(h) $-\frac{3}{\sqrt{10}}$