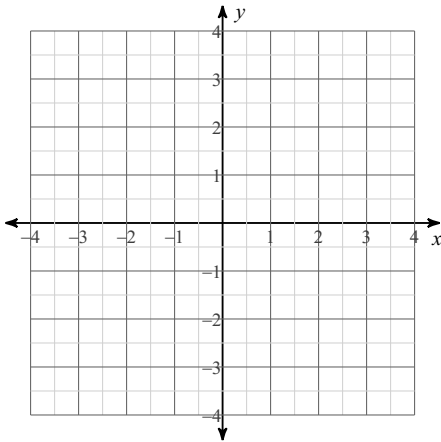
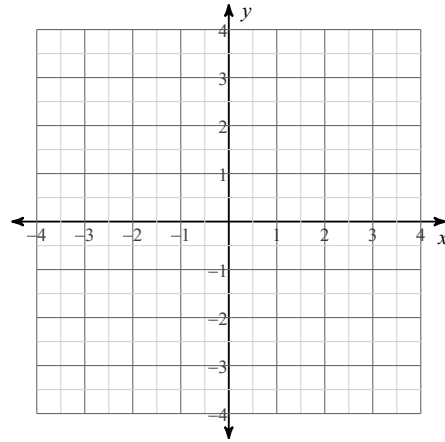


Convert each pair of polar coordinates to rectangular coordinates.

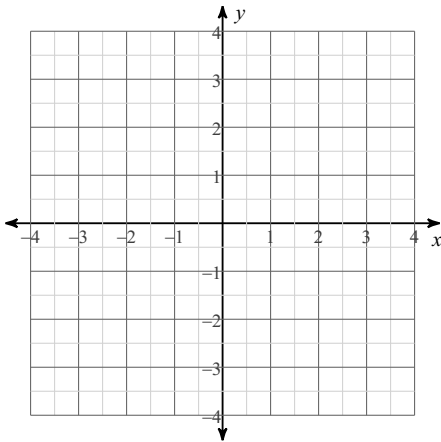
1) $(1, 330^\circ)$



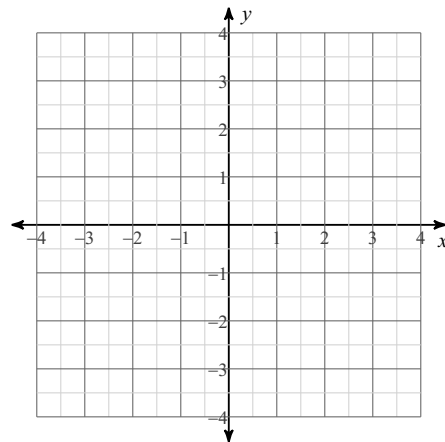
2) $(1, \frac{\pi}{6})$



3) $(3, 330^\circ)$

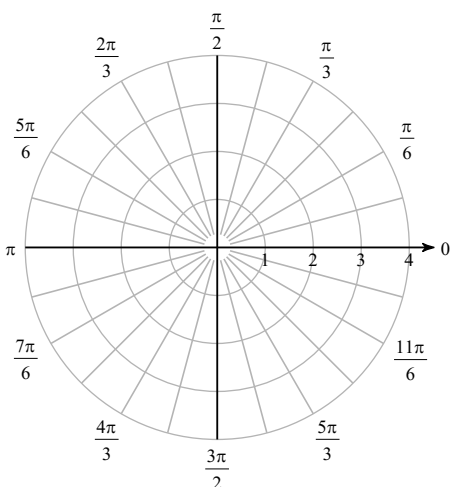


4) $(1, \frac{4\pi}{3})$

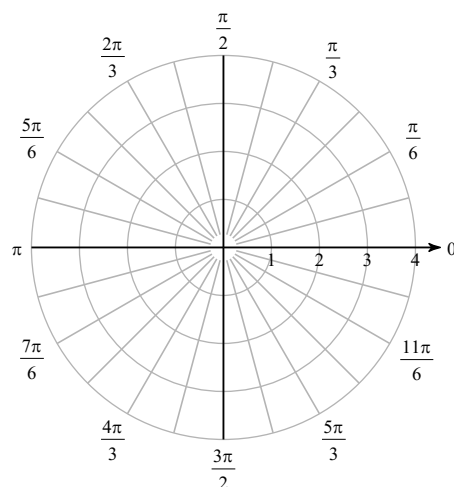


Convert each pair of rectangular coordinates to polar coordinates where $r > 0$ and $0 \leq \theta < 2\pi$.

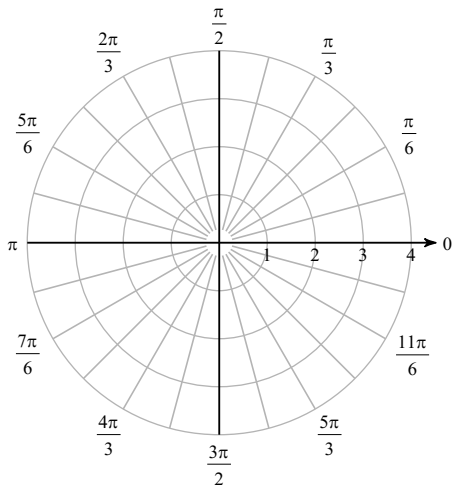
5) $(-\sqrt{2}, \sqrt{2})$



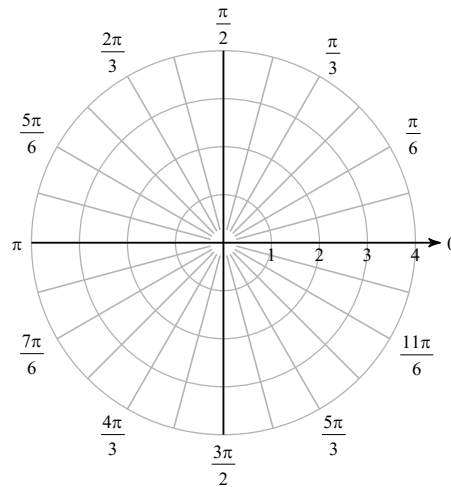
6) $(-\sqrt{3}, 1)$



7) $(2, 2\sqrt{3})$



8) $(-2\sqrt{2}, -2\sqrt{2})$



Convert numbers in rectangular form to polar form and numbers in polar form to rectangular form.

9) $2\sqrt{2} + 2i\sqrt{2}$

10) $\frac{\sqrt{30}}{2} - \frac{\sqrt{30}}{2}i$

11) $-\frac{\sqrt{31}}{2} + \frac{\sqrt{93}}{2}i$

12) $4(\cos 270 + i\sin 270)$

13) $-\frac{5}{2} - \frac{5\sqrt{3}}{2}i$

14) $6(\cos 135 + i\sin 135)$

15) $3\left(\cos \frac{\pi}{2} + i\sin \frac{\pi}{2}\right)$

16) $-\frac{\sqrt{42}}{2} - \frac{\sqrt{42}}{2}i$

Find the absolute value.

17) $-2 - 4i$

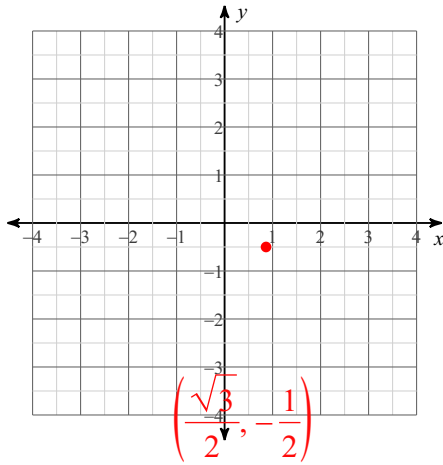
18) $-2 - 3i$

19) $5\left(\cos \frac{7\pi}{4} + i\sin \frac{7\pi}{4}\right)$

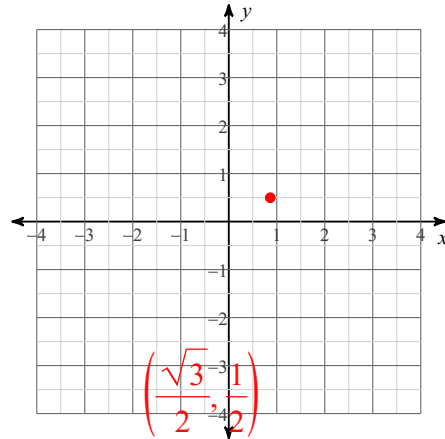
20) $4 + 5i$

Convert each pair of polar coordinates to rectangular coordinates.

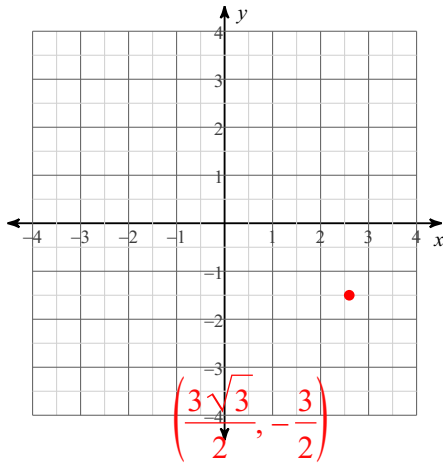
1) $(1, 330^\circ)$



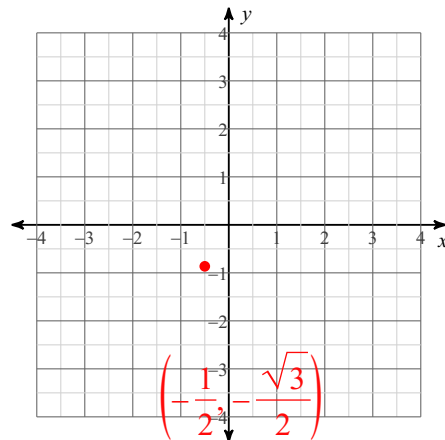
2) $(1, \frac{\pi}{6})$



3) $(3, 330^\circ)$

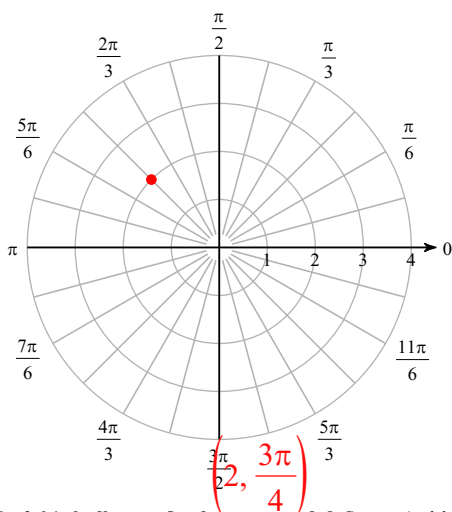


4) $(1, \frac{4\pi}{3})$

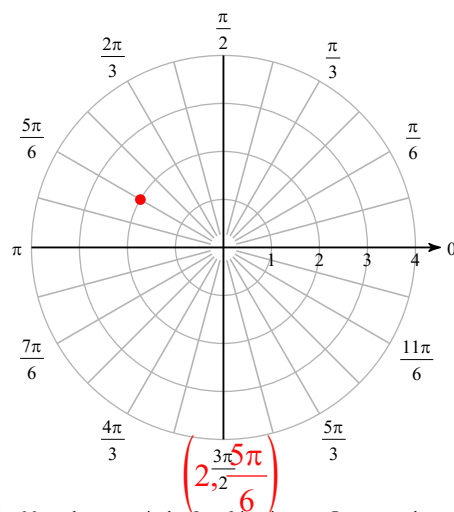


Convert each pair of rectangular coordinates to polar coordinates where $r > 0$ and $0 \leq \theta < 2\pi$.

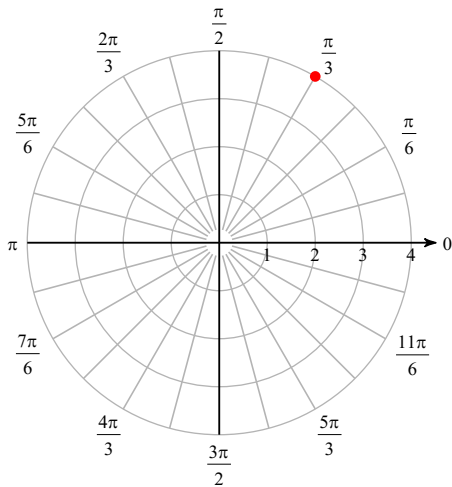
5) $(-\sqrt{2}, \sqrt{2})$



6) $(-\sqrt{3}, 1)$

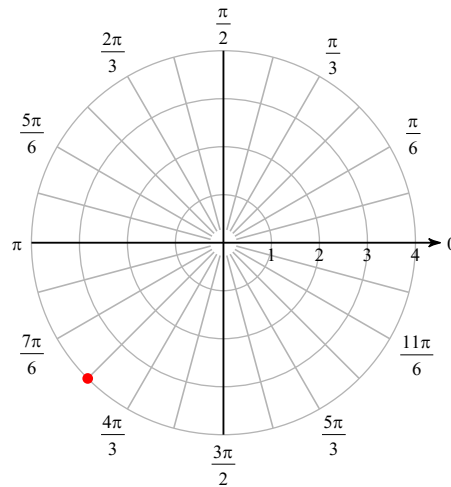


7) $(2, 2\sqrt{3})$



$\left(4, \frac{\pi}{3}\right)$

8) $(-2\sqrt{2}, -2\sqrt{2})$



$\left(4, \frac{5\pi}{4}\right)$

Convert numbers in rectangular form to polar form and numbers in polar form to rectangular form.

9) $2\sqrt{2} + 2i\sqrt{2}$
 $4\left(\cos \frac{\pi}{4} + i\sin \frac{\pi}{4}\right)$

10) $\frac{\sqrt{30}}{2} - \frac{\sqrt{30}}{2}i$
 $\sqrt{15}\left(\cos \frac{7\pi}{4} + i\sin \frac{7\pi}{4}\right)$

11) $-\frac{\sqrt{31}}{2} + \frac{\sqrt{93}}{2}i$
 $\sqrt{31}\left(\cos \frac{2\pi}{3} + i\sin \frac{2\pi}{3}\right)$

12) $4(\cos 270 + i\sin 270)$
 $-4i$

13) $-\frac{5}{2} - \frac{5\sqrt{3}}{2}i$
 $5\left(\cos \frac{4\pi}{3} + i\sin \frac{4\pi}{3}\right)$

14) $6(\cos 135 + i\sin 135)$
 $-3\sqrt{2} + 3i\sqrt{2}$

15) $3\left(\cos \frac{\pi}{2} + i\sin \frac{\pi}{2}\right)$
 $3i$

16) $-\frac{\sqrt{42}}{2} - \frac{\sqrt{42}}{2}i$
 $\sqrt{21}(\cos 225 + i\sin 225)$

Find the absolute value.

17) $-2 - 4i$
 $2\sqrt{5}$

18) $-2 - 3i$
 $\sqrt{13}$

19) $5\left(\cos \frac{7\pi}{4} + i\sin \frac{7\pi}{4}\right)$
 5

20) $4 + 5i$
 $\sqrt{41}$