

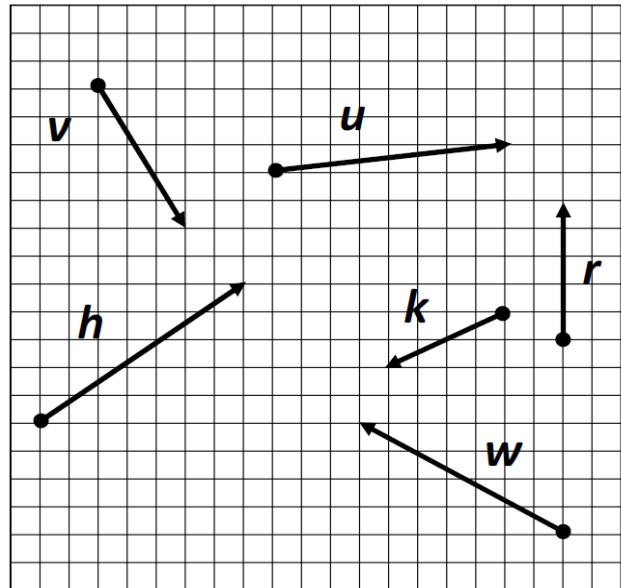
Use the vectors to the right to figure out the component form, magnitude, and direction. Show work!
 Round to the nearest tenth for magnitude & to the nearest degree for direction.

Component Form $\langle a, b \rangle$

Magnitude $|v| = \sqrt{a^2 + b^2}$

Direction = θ

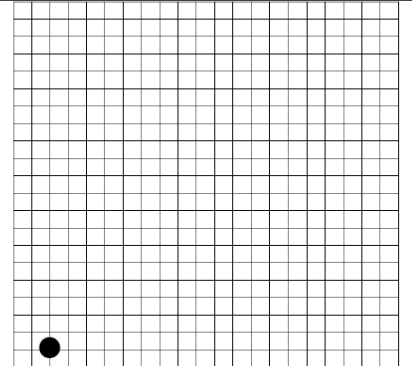
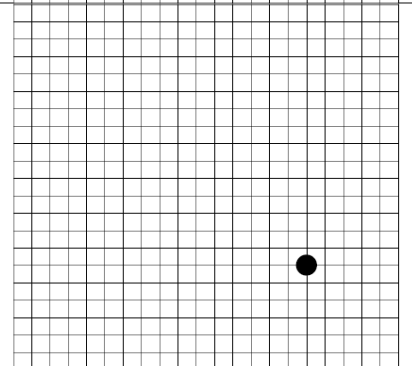
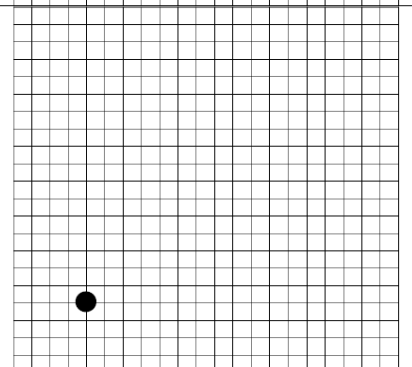
<u>Case 1</u>	$v = \langle a, b \rangle$
If $a > 0$, then	$\theta = \tan^{-1}\left(\frac{b}{a}\right)$
<u>Case 2</u>	$v = \langle a, b \rangle$
If $a < 0$, then	$\theta = \tan^{-1}\left(\frac{b}{a}\right) + 180^\circ$
<u>Case 3</u>	$v = \langle a, b \rangle$
If $a = 0$, then	$\theta = \pm 90^\circ$



Component Form	Magnitude	Direction
$v =$		
$u =$		
$h =$		
$k =$		
$r =$		
$w =$		

$$\langle \overbrace{|v| \cos \theta}^X, \overbrace{|v| \sin \theta}^Y \rangle$$

Find the component form and draw each vector. Round to the nearest whole number. Show work!

Given		Component Form	Drawing
1) Magnitude $ u = 20$	Angle $\theta = 45^\circ$	$\langle \quad , \quad \rangle$	
2) Magnitude $ v = 11$	Angle $\theta = 150^\circ$	$\langle \quad , \quad \rangle$	
3) Magnitude $ u = 7$	Angle $\theta = 25^\circ$	$\langle \quad , \quad \rangle$	
4) Magnitude $ v = 9$	Angle $\theta = 120^\circ$	$\langle \quad , \quad \rangle$	