PhyzJob: Vector Madness!

1. Write the displacement vectors shown to the right in rectangular form. (Each square on the grid is 1.0m by 1.0m.)

$$a = (4.0m, 7.0m)$$

$$b = (0.0m, 4.0m)$$

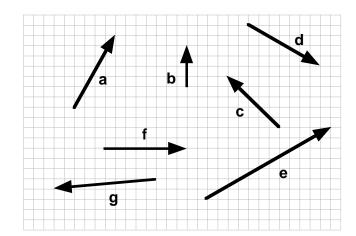
$$c = (-5.0m, 5.0m)$$

$$d = (7.0m, -4.0m)$$

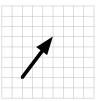
$$e = (12.0m, 7.0m)$$

$$f = (8.0m, 0.0m)$$

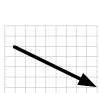
$$g = (-10.0m, -1.0m)$$



2. Draw the vectors whose rectangular components are given below. (Place the start and end points of the vector so that it fits on the graph.)



$$\mathbf{m} = (3.0 \,\mathrm{m}, \, 4.0 \,\mathrm{m})$$



$$\mathbf{p} = (8.0 \text{m}, -4.0 \text{m})$$



$$\mathbf{n} = (-5.0 \,\mathrm{m}, \, -2.0 \,\mathrm{m})$$



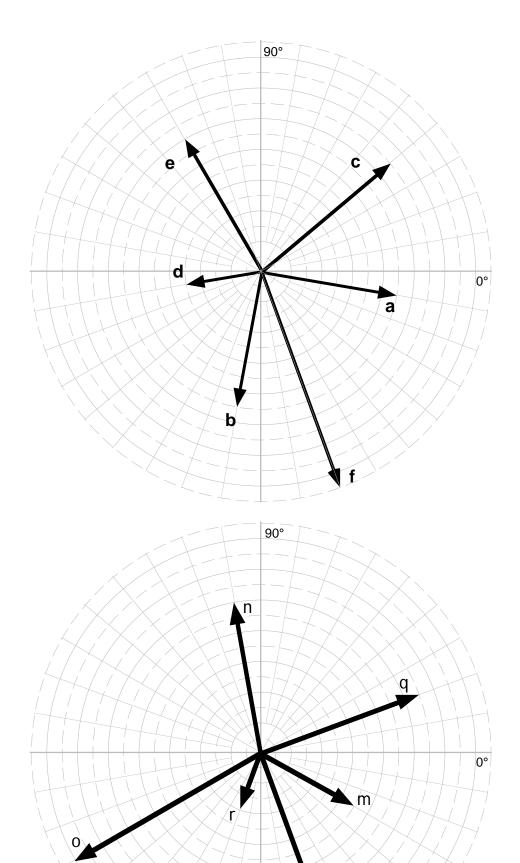
$$\mathbf{q} = (-7.0 \text{m}, 0.0 \text{m})$$



$$\mathbf{o} = (-6.0 \,\mathrm{m}, \, 6.0 \,\mathrm{m})$$



$$r = (0.0m, -3.0m)$$



3. Write the displacement vectors shown to the left in polar components.

$$a = (9m; 350^{\circ})$$

b =
$$(9m; 260^{\circ})$$

$$c = (11m; 40^{\circ})$$

$$d = (5m; 190^{\circ})$$

$$f = (15m; 290^\circ)$$

Draw a different displacement vector and label it **g.**

$$g =$$

4. Draw the vectors whose polar components are given below.

$$\mathbf{m} = (7\text{m}; 330^{\circ})$$

$$\mathbf{n} = (10\text{m}; 100^\circ)$$

$$\mathbf{p} = (15\text{m}; 290^\circ)$$

$$q = (11m; 20^{\circ})$$

$$r = (4m; 250^{\circ})$$