$\qquad$

1) Find the critical numbers of the function $f(x)=3 x^{\frac{1}{3}}(x-8)$. Over which intervals is the graph of the function increasing?
2) The three vectors in the $x-y$ plane below represent forces. Draw in the horizontal and vertical components of each of the three vectors into the diagram on the left. Put into the $x-y$ plane on the right the vector that represents the combined effect of the three forces. Specify the endpoint of the resultant.


