

QUIZ MATH 151 Sections 525-527

WEEK 3

NAME _____ SECTION _____

Show all your work and box your final answer.

1. [25pts] Find the work done by a force \mathbf{F} of $2N$ acting in the direction $N30^\circ W$ (i.e. 30° west of the northerly direction) in moving an object $6m$ due west.
2. [25pts] Find the value of x such that the vectors $x\mathbf{i} - 2\mathbf{j}$ and $x\mathbf{i} + 8\mathbf{j}$ are orthogonal.
3. [25pts] Find parametric equations for the line passing through the pair of points: $(1, 3)$ and $(-2, 7)$.
4. [25pts] An object is moving in the xy -plane and its position after t seconds is $\mathbf{r}(t) = (t^2 + 2t)\mathbf{i} + (t + 4)\mathbf{j}$.
Find the position of the object at time $t = 2$.