QUIZ 8 - MATH 131 YOUR NAME:____

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Find the measure of the angle between the two vectors $\vec{v} = \langle -1, 5 \rangle$ and $\vec{w} = \langle -2, 3 \rangle$.

2. Find $\operatorname{proj}_{\vec{w}}\vec{v}$ if $\vec{v} = \langle -7, 5 \rangle$ and $\vec{w} = \langle -4, 1 \rangle$.

3. The captain of a boat is steering at a heading of 327° at 18 mph. The current is flowing at 4 mph at a heading of 60°. Find the course (to the nearest degree) of the boat.

- 4. Perform the indicated operations and write your answers in standard form (Please, show all your work):
 - (a) (5-3i) (2+9i) =

(b)
$$(5+2\sqrt{-16})(1-\sqrt{-25}) =$$

(c)
$$\frac{-7+26i}{4+3i} =$$