

Time Limit: 5 minutes

Instructions: Open book. Open notes. Calculator allowed.

Instructions for all quizzes: **Do not discuss any aspect of this quiz with other midshipmen until after 6th period.**

Print your last name above. Also, fill in the bubble for your section.

Fill the bubble for the correct answer. Also, write your answers in any blanks provided.

Your work will not be graded unless the instructions request you show your work.

Throughout this quiz we consider the three points

$$P = (1, 1, 1), \quad Q = (2, 3, 2), \quad R = (1, 2, 4).$$

1. We have $\overrightarrow{PQ} = \langle 1, 2, 1 \rangle$ and $\overrightarrow{PR} =$ _____

2. Compute the cross product $\overrightarrow{PQ} \times \overrightarrow{PR}$. **Answer:** $\overrightarrow{PQ} \times \overrightarrow{PR} =$ _____

3. Find the area of $\triangle PQR$.

6

$\sqrt{35}$

$\sqrt{35}/2$

3

none of above; correct is _____

4. Find all unit vectors orthogonal to the plane through P , Q , and R .

PUT YOUR ANSWER ON THE LINE AND SHOW YOUR WORK BELOW.
