

EXTRA “COEFFICIENT” EXAMPLES, PRECALCULUS

1. GIVEN THE VECTORS $\vec{v} = \langle 1, 3, 0 \rangle$ $\vec{w} = \langle -1, B, 2 \rangle$ $\vec{t} = \langle 2, 4, -1 \rangle$,

IF $(\vec{v} \times \vec{w}) \cdot \vec{t} = 8$ WHAT MUST BE THE VALUE FOR B ?

2. GIVEN THE POINTS $P = (2, 1, 3)$ $Q = (B, -5, 0)$ $R = (0, -7, 4)$,

ASSUME THE VECTORS \overrightarrow{PQ} AND \overrightarrow{RQ} ARE ORTHOGONAL. THERE ARE TWO VALUES FOR B WHICH WILL CAUSE THIS TO OCCUR, ONE IS $B = 0$. WHAT IS THE OTHER?

3. GIVEN THE MODEL $N(t) = B e^{(.02t)}$, AND THAT $N(6) = 11.838717$, FIND THE VALUE FOR B AND ALSO FIND THE VALUE OF $N(10)$.