

Name: KEY

Math 2030, Winter 2011, Quiz 1
12 January 2011
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No calculators needed or allowed.

Let $\vec{u} = (4, 3)$ and $\vec{v} = (1, 7)$. Compute

1. $|\vec{u}|$
2. $\vec{u} + 3\vec{v}$
3. $\vec{u} - \vec{v}$
4. the point half way between $(4, 3)$ and $(1, 7)$.

Answers:

1. $|\vec{u}| = \sqrt{4^2 + 3^2} = \sqrt{25} = 5$

2. $\vec{u} + 3\vec{v} = (4, 3) + 3(1, 7)$
 $= (4, 3) + (3, 21)$
 $= (7, 24)$

3. $\vec{u} - \vec{v} = (4, 3) - (1, 7) = (3, -4)$

4. $\frac{1}{2}(4, 3) + \frac{1}{2}(1, 7) = \frac{1}{2}(4+1, 3+7) = (\frac{5}{2}, \frac{10}{2}) = (\frac{5}{2}, 5)$

Points
3

2

2

3