Pre-Calculus Homework #21 – Answer Key

1) $\left\langle -192\sqrt{5}-120\sqrt{13}-49, -288\sqrt{5}-180\sqrt{13}+14 \right\rangle$

2) 4

3) $\frac{9\sqrt{10}}{50}i-\frac{13\sqrt{10}}{50}j$

4) $-90.0557656073i+170.43111846j$ which gives you 196.76 pounds at a bearing of N27.85°W

5) $-175.508552688i-98.4807707909j$ which gives you 201.25 mph at a bearing of 240.70°

6) Arithmetic $A_n=112-17n$ $23^{rd}=-279$ -908 is the 60^{th} term

7) Geometric $A_n=\frac{5}{243}(3)^{n-1}$ $17^{th}=885,735$ 10,935 is the 13^{th} term

8) $-3,430$

9) 18

10) 3,996

11) Geometric $A_n=729(\frac{2}{3})^{n-1}$ $13^{th}=\frac{4096}{729}$ $\frac{65,536}{59,049}$ is the 17^{th} term

12) Arithmetic $A_n=-655+58n$ $41^{st}=1,723$ 3,115 is the 65^{th} term

13) $\frac{645}{7}$

14) -4.419557×10^{13}

15) 36 feet

16) \$2,415

17) Geometric $A_n=-786432(-\frac{1}{2})^{n-1}$ $31^{st}=\frac{-3}{4096}$ $\frac{3}{32}$ is the 24^{th} term

18) $-\infty$

19) $\frac{-9}{16}$

20) 30.3308 feet