# Math 126 E - Spring 2012 Mid-Term Exam Number Two <br> May 17, 2012 <br> Answers 

1. $\frac{455}{16}$
2. $(0,0)$ is a local minimum and $(2,0)$ is a saddle point.
3. (a) $\left(e^{10}-1,-40, e^{-10}-11\right)$ (b) $(0,0,0)$ and $\left(e^{2}-1,0, e^{-2}-3\right)$
4. The change in $y$ is approximately $\frac{\pi-1}{10}$.
5. $\frac{4}{3}\left(e^{8}-1\right)$
