Department of Mathematics, Bennett University
Engineering Calculus (EMAT101L)
Solutions for Tutorial Sheet 3

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1. (a) Series is converget and it converges to 2.
   (b) Series is converget and it converges to $\sin^2 1 + \sin^2 \frac{1}{2}$.
2. (a) Divergent
   (b) Divergent
   (c) Divergent
   (d) Divergent
   (e) Convergent
3. (a) Convergent
   (b) Divergent
   (c) Convergent
   (d) Convergent
   (e) Convergent
4. (a) Convergent
   (b) Divergent
   (c) Convergent
5. (a) Conditionally convergent.
   (b) Absolutely convergent.
   (c) Conditionally convergent.
6. (a) Series converges for $|x| < \frac{1}{2}$.
   (b) Series converges if $|x| < e$.
   (c) Series converges if $\frac{|x-1|}{e} < 1$.