

Name:
J#:
Date: <b>2017 July 13</b>

Exercise Type (Cost):

**In-Class (1AP)**

Standard: This student is able to... <b>C06: AreaBtCurv.</b> Express an area between curves as a definite integral.	Mark:
Extra1	★ reattempt due on:

Find a definite integral equal to the area bounded by  $y = 2x$  and  $y = 2x^2 - 4x$ .

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**In-Class (1AP)**

Standard: This student is able to...	Mark:
<b>C11: SeqLim.</b> Compute the limit of a convergent sequence.	
4/4	★ reattempt due on:

Find  $\lim_{m \rightarrow \infty} \frac{3 - m^2}{4m^2 - 5m + 7}$ .

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Standard: This student is able to...	Mark:
<b>C12: PartSum.</b> Find the value of a convergent series by expressing it as a limit of partial sums.	
3/4	★ reattempt due on:

Recall that  $\lim_{n \rightarrow \infty} x^n$  diverges when  $|x| \geq 1$ . Find a formula for the partial sum  $s_n = a_0 + a_1 + \cdots + a_n$  where  $a_n = \frac{2^{2n}}{3^n}$ . Then use this formula to prove that  $\sum_{n=0}^{\infty} \frac{2^{2n}}{3^n}$  diverges.

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Standard: This student is able to...	Mark:
<b>S11: GeoAlt.</b> Determine if a geometric series or alternating series is convergent or divergent.	
2/3	★ reattempt due on:

Let  $a_n$  be positive and monotonic (non-increasing or non-decreasing). Recall that the alternating series  $\sum_{n=N}^{\infty} (-1)^n a_n$  converges if and only if  $\lim_{n \rightarrow \infty} a_n = 0$ . Does the series  $\sum_{k=2}^{\infty} (-1)^k \frac{k}{k^2+1} = \frac{2}{5} - \frac{3}{10} + \frac{4}{17} - \frac{5}{26} + \dots$  converge or diverge?

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**In-Class (1AP)**

Standard: This student is able to... <b>S12: IntTest.</b> Use the integral test to determine series convergence.	Mark:
1/3 ★ reattempt due on:	

Does  $\int_8^\infty \frac{3}{\sqrt[3]{x}} dx$  converge or diverge?

Does  $\sum_{k=3}^\infty \frac{3}{\sqrt[3]{k}}$  converge or diverge?