

MA 166: Quiz 7 Solutions

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You have **15 minutes** to complete this quiz. You may work in groups, but you are not allowed to use any other resources.

Problem 1. For **one** of the following integrals, determine whether it is convergent or divergent. If it is convergent, evaluate it

(a) $\int_0^1 \frac{dx}{\sqrt{x}}$

(b) $\int_1^5 \frac{dx}{(5-x)^2}$

(c) $\int_0^\infty x e^{-x^2} dx.$

Problem 2. Find the length of the curve

$$y = \ln(x^2 - 1), \quad 2 \leq x \leq 5.$$