

Name:	A#:	Section:
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1. Determine whether the following series converge or diverge:

(a) $\sum_{n=1}^{\infty} \frac{\sin^2 n}{n^2}$

(b) $\sum_{n=2}^{\infty} \frac{2}{\sqrt{n^2 - 3}}$

(c) $\sum_{m=4}^{\infty} \frac{\ln n}{n^2 - 3n}$

$$(d) \sum_{n=1}^{\infty} \frac{n^2 - 4\sqrt{n}}{n^3}$$

$$(e) \sum_{n=1}^{\infty} \frac{1}{3n^2}$$

$$(f) \sum_{k=1}^{\infty} \frac{4^k}{5^k - 2k}$$