

Solutions

Each answer shows the steps, then the **result**.

2.1

- Converges ($p = 4 > 1$)

2.2

- Diverges ($p = \frac{2}{3} \leq 1$)

2.3

- No, it diverges; $p = 1$

3.1 C

- converges iff $p > 1$

3.2

(a)

- convergent, $p = 1.2 > 1$

(b)

- divergent, $p = 0.9 \leq 1$

(c)

- divergent, $p = 1$

3.3

- $\sum_{p=1} \frac{1}{\sqrt[n]{n}}$ has $p = \frac{1}{2} \leq 1$ (diverges); $\sum \frac{1}{n^2}$ has $p = 2 > 1$ (converges) — the boundary is