

Convergent and Bounded Sequence- Worksheet

1. Find the bounds of the sequence $a_n = 3 - \frac{1}{n}$.
2. Find the bounds of the sequence $a_n = 3n^2 - n$.
3. Does the sequence $a_n = \frac{3}{n^2}$ converge? Why?
4. Does the sequence $a_n = \frac{n+1}{n^2}$ converge? Why?
5. Does the sequence $a_n = \left(\frac{e^n}{n}\right)^2$ converge? Why?
6. Does the sequence $a_n = \frac{(-2)^{n-1}}{n^2}$ converge? Why?
7. Does the sequence $a_n = \frac{an^2-2}{b^2n-n^2}$ converge? Why?
8. Does the sequence $a_n = (-2)^{n-1}$ converge? Why?
9. Does the sequence $a_n = \frac{\cos n}{n}$ converge? Why?
10. Does the sequence $a_n = \frac{n}{\ln n}$ converge? Why?