

Quiz 12 - Math 152

Fill in the following table:

a_n	first five terms	$\lim_{n \rightarrow \infty} a_n$	$\sum_{n=1}^{\infty} a_n$
$\frac{2^n}{3^n}$	$\frac{2}{3}, \frac{4}{9}, \frac{8}{27}, \frac{16}{81}, \frac{32}{243}$	0	$\frac{\frac{2}{3}}{1-\frac{2}{3}} = 2$
$(-1)^n \left(\frac{3}{2}\right)^n$	$-\frac{3}{2}, \frac{9}{4}, -\frac{27}{8}, \frac{81}{16}, -\frac{243}{32}$	<i>DNE</i>	<i>DNE</i>
$\frac{1}{n} - \frac{1}{n+2}$	$\frac{2}{3}, \frac{1}{4}, \frac{2}{15}, \frac{1}{12}, \frac{2}{35}$	0	$\frac{3}{2}$
$\sin(\pi n)$	0, 0, 0, 0, 0	0	0