$r=-3$ $S_5=244$ find a_1

$244=a_1\left(\frac{1-(-3)^5}{1-(-3)}\right)$

$244=a_1\left(\frac{244}{4}\right)$

$244=a_1(61)$

$a_1=4$

(61) $6+1+\frac{1}{6}+\ldots$

$r=\frac{1}{6}$ $S=\frac{6}{1-\frac{1}{6}}=\frac{36}{5}$

$S=7.2$

(62) $16+4+1+\ldots$

$r=\frac{1}{4}$ $S=\frac{16}{1-\frac{1}{4}}$ $S=21.3$

(63) $2+4+8+16+\ldots$

$r=2$ NO SUM

(64) $1+7+49+343\ldots$

$r=7$ NO SUM

(65) $1+(-\frac{1}{4})+\frac{1}{16}+\ldots$

$r=-\frac{1}{4}$

$S=\frac{1}{1-(-\frac{1}{4})}=.8$

(66) $100+50+25+\ldots$

$r=\frac{1}{2}$ $S=\frac{100}{1-\frac{1}{2}}=200$

(70) $\frac{1}{3}+(-\frac{1}{9})+\frac{1}{27}+\ldots$

$r=-\frac{1}{3}$ $S=\frac{1/3}{1-(-\frac{1}{3})}=.25$

(67) $60+30+15+\ldots$

$r=\frac{1}{2}$ $S=\frac{60}{1-\frac{1}{2}}=120$

(68) $90+30+10+\ldots$

$r=\frac{1}{3}$ $S=\frac{90}{1-\frac{1}{3}}=135$

(69) $\frac{1}{4}+\frac{1}{2}+1+2+\ldots$

$r=2$ NO SUM

(71) $-\frac{1}{5}+\frac{1}{25}+(-\frac{1}{125})$ $r=-\frac{1}{5}$

$S=\frac{-1/5}{1-(-1/5)}=\frac{-1}{6}$ or $-.167$

(72) $6+8+\frac{32}{3}$ NO SUM

(73) $10+12+\frac{72}{5}$ NO SUM

(74) $\frac{2}{3}+\frac{2}{9}+\frac{2}{27}+\ldots$

$r=\frac{1}{3}$ $S=\frac{2/3}{1-\frac{1}{3}}=1$

(75) $\frac{4}{7}+\frac{4}{49}+\frac{4}{343}+\ldots$

$r=\frac{1}{7}$ $S=\frac{4/7}{1-\frac{1}{7}}=\frac{2}{3}$ or $.667$

Tab

$2 - \frac{1}{3} + \frac{1}{18} + \ldots$

$r = -\frac{1}{6}$ $S = \frac{2}{1-(-\frac{1}{6})} = \frac{12}{7}$ or 1.714

(77) $4 - \frac{1}{3} + \frac{1}{36} - \ldots$

$r = \frac{-1}{12}$ $S = \frac{4}{1-(-\frac{1}{12})}$

$S = \frac{48}{13}$ or 3.692

(78) $-\frac{8}{49} + \frac{8}{7} - 8 + \ldots$

$r = 7$ NO SUM

(79) $-\frac{3}{5} - \frac{9}{10} - \frac{27}{20} - \ldots$

$r = 3/2$ NO SUM

(80) $\frac{3}{4} + \frac{9}{20} + \frac{27}{100} + \ldots$

$r = \frac{3}{5}$ $S = \frac{3/4}{1-3/5} = 1.875$ or $\frac{15}{8}$