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(24) a) $a_n = a_1 \cdot r^{n-1} = 5\left(\frac{1}{2}\right)^{n-1}$

$$S = \frac{a_1}{1-r} = \frac{5}{1-\frac{1}{2}} = \frac{5}{\frac{1}{2}} = 10$$

b) $a_n = a_1 \cdot r^{n-1} = 2 \cdot \left(\frac{1}{10}\right)^{n-1}$

$$S = \frac{a_1}{1-r} = \frac{2}{1-\frac{1}{10}} = \frac{2}{\frac{9}{10}} = \frac{20}{9}$$

(25) a) $r = \frac{15}{5} = \frac{45}{15} = 3$ // $r > 1$ no se puede. es ∞

b) $r = \frac{3\sqrt{3}}{3} = \frac{9}{3\sqrt{3}} = \frac{9\sqrt{3}}{9} = \sqrt{3} > 1$ No se puede

$S = \infty$

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(26) $S = \frac{a_1}{1-r}$ // $20 = \frac{5}{1-r}$ // $1-r = \frac{5}{20}$ // $-r = \frac{5}{20} - 1$

$r = 1 - \frac{5}{20} = \frac{20}{20} - \frac{5}{20} = \frac{15}{20} = \frac{3}{4}$

$r = \frac{3}{4}$

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(27) $a_n = a_1 \cdot r^{n-1}$

$a_4 = 3 \cdot r^3 = 3 \cdot 5^3 = 375$

$P_4 = \sqrt{(a_1 \cdot a_4)^4} = \sqrt{(3 \cdot 375)^4} = 1.125^2 = 1.265.625$

(28) $a_n = a_1 \cdot r^{n-1}$

$a_4 = a_1 \cdot r^{n-1}$ // $a_1 = \frac{a_4}{r^{n-1}} = \frac{12}{3^3} = \frac{12}{27} = \frac{4}{9}$

$a_{10} = a_1 \cdot r^{n-1} = \frac{4}{9} \cdot 3^7 = 4 \cdot 3^7 = 8.748$

$P_{10} = \sqrt{(a_1 \cdot a_{10})^n} = \sqrt{\left(\frac{4}{9} \cdot 8.748\right)^{10}} = 3.888^5 =$

$= 8'884 \cdot 10^{17}$

(29) $a_n = 4 \cdot 2^{n-1}$ // $a_1 = 4 \cdot 2^0 = 4$

$a_6 = 4 \cdot 2^5 = 128$

$P_6 = \sqrt{(a_1 \cdot a_6)^6} = (4 \cdot 128)^3 = 134.217.728$