27 (6) $a_1 = 2 \qquad a_3 = 4$

$q^2 = \frac{a_3}{a_1} = 2 \longrightarrow \boxed{q = \sqrt{2}}$ $\qquad a_n = 2 \cdot (\sqrt{2})^{n-1} = 2^{\frac{n+1}{2}}$

$b_1 + b_2 + \dots + b_n = \log_2 a_1 + \log_2 a_2 + \dots + \log_2 a_n = \log_2 2^1 + \log_2 2^{1.5} + \log_2 2^2 + \dots$
$+ \log_2 2^{\frac{n+1}{2}} = 1 + 1.5 + 2 + \dots + \frac{n+1}{2} = \frac{n}{2}\left[1 + \frac{n+1}{2}\right] = \frac{n}{2} \cdot \frac{n+3}{2} = \frac{1}{4}(n^2 + 3n)$

(7) $a_n = 1024 = 2^{10} = 2^{\frac{n+1}{2}} \longrightarrow 10 = \frac{n+1}{2} \longrightarrow \boxed{n = 19}$

$S_{(b)} = \frac{1}{4}(19^2 + 3 \cdot 19) = \frac{1}{4}(361 + 57) = \frac{1}{4} \cdot 418 = 104\frac{1}{2}$