⑦ $1 + 2 + 4 + 8 + 16 + 32$

a) $\displaystyle\sum_{k=1}^{6} 2^{k-1} = Ja$ ✓

b) $\displaystyle\sum_{k=0}^{5} 2^{k} = Ja$ ✓

c) $\displaystyle\sum_{k=-1}^{4} 2^{k+1} = Ja$ ✓

⑮

$\displaystyle\sum_{k=1}^{n} a_k = -5$ und $\displaystyle\sum_{k=1}^{n} b_k = 6$

a) $\displaystyle\sum_{k=1}^{n} 3 a_k = -15$ ✓

b) $\displaystyle\sum_{k=1}^{n} \frac{b_k}{6} = 1$ ✓

c) $\displaystyle\sum_{k=1}^{n} (a_k + b_k) = \sum_{k=1}^{n} a_k + \sum_{k=1}^{n} b_k = 1$ ✓

d) $\displaystyle\sum_{k=1}^{n} (a_k - b_k) = \sum_{k=1}^{n} a_k - \sum_{k=1}^{n} b_k = -11$ ✓

e) $\displaystyle\sum_{k=1}^{n} (b_k - 2a_k) = \sum_{k=1}^{n} b_k - \underbrace{\sum_{k=1}^{n} 2a_k}_{-10} = 16$ ✓

⑰

$\displaystyle\sum_{k=1}^{7} (-2k) = -2\cdot1 + -2\cdot2 + -2\cdot3 + -2\cdot4 + -2\cdot5 + -2\cdot6 + -2\cdot7 = -56$ ✓

⑲

$\displaystyle\sum_{k=1}^{5} k(3k+5) = \left(1(3\cdot1+5)\right) + \left(2(3\cdot2+5)\right) + \left(3(3\cdot3+5)\right) + \left(4(3\cdot4+5)\right) + \left(5(3\cdot5+5)\right) = 240$ ✓