(%i1)   sum (i^2, i, 1, n);

(%o1) $\sum_{i=1}^{n} i^2$

(%i2)   sum (i^2, i, 1, n), simpsum;

(%o2) $\dfrac{2\,n^3 + 3\,n^2 + n}{6}$

(%i3)   sum (5^-i, i, 1, n);

(%o3) $\sum_{i=1}^{n} \dfrac{1}{5^i}$

(%i4)   sum (5^-n, n, 1, inf),simpsum;

(%o4) $\dfrac{1}{4}$

(%i5)   sum (5^i,i, 1, n);

(%o5) $\sum_{i=1}^{n} 5^i$

(%i6)   sum (5^i,i, 1, n), simpsum;

(%o6) $\dfrac{5^{n+1} - 5}{4}$

(%i7)   sum (1/3^i, i, 1, inf);

(%o7) $\sum_{i=1}^{\infty} \dfrac{1}{3^i}$

(%i8)   sum (1/3^i, i, 1, inf),simpsum;

(%o8) $\dfrac{1}{2}$

(%i9)   sum (1/i^2, i, 1, inf);

(%o9) $\sum_{i=1}^{\infty} \dfrac{1}{i^2}$

(%i10)   sum (1/i^2, i, 1, inf),simpsum;

(%o10) $\dfrac{\pi^2}{6}$

(%i11)   sum (1/i^4, i, 1, inf);

(%o11) $\sum_{i=1}^{\infty} \dfrac{1}{i^4}$

(%i12)   sum (1/i^4, i, 1, inf),simpsum;

(%o12) $\dfrac{\pi^4}{90}$