

```

FF[n_] := Sum[1, {a, 2, n^(1/3)}, {b, a+1, (n/a)^(1/2)}, {c, b+1, n/(a b)}]
FF[100]
33
FG[n_] := Sum[1, {a, 2, n^(1/3)}, {b, a+1, (n/a)^(1/2)}, {c, 2, n/(a b)}] -
Sum[1, {a, 2, n^(1/3)}, {b, a+1, (n/a)^(1/2)}, {c, 2, b}]
FG[100]
33
FH[n_] := Sum[1, {a, 2, n^(1/3)}, {b, 2, (n/a)^(1/2)}, {c, 2, n/(a b)}] -
Sum[1, {a, 2, n^(1/3)}, {b, 2, a}, {c, 2, n/(a b)}] -
Sum[1, {a, 2, n^(1/3)}, {b, a+1, (n/a)^(1/2)}, {c, 2, b}]
FH[100]
33
FI[n_] := Sum[1, {a, 2, n^(1/3)}, {b, 2, (n/a)^(1/2)}, {c, 2, n/(a b)}] -
Sum[1, {a, 2, n^(1/3)}, {b, 2, a}, {c, 2, n/(a b)}] -
Sum[1, {a, 2, n^(1/3)}, {b, 2, (n/a)^(1/2)}, {c, 2, b}] +
Sum[1, {a, 2, n^(1/3)}, {b, 2, a}, {c, 2, b}]
FI[100]
33
FF[11111]
43379
FI[11111]
43379
FJ[n_] := Sum[1, {a, 2, n^(1/3)}, {b, 2, (n/a)^(1/2)}, {c, 1, n/(a b)}] -
Sum[1, {a, 2, n^(1/3)}, {b, 2, a}, {c, 1, n/(a b)}] -
Sum[1, {a, 2, n^(1/3)}, {b, 2, (n/a)^(1/2)}, {c, 1, b}] +
Sum[1, {a, 2, n^(1/3)}, {b, 2, a}, {c, 1, b}]
FJ[11111]
43379
FK[n_] := Sum[Floor[n/(a b)], {a, 2, n^(1/3)}, {b, 2, (n/a)^(1/2)}] -
Sum[Floor[n/(a b)], {a, 2, n^(1/3)}, {b, 2, a}] -
Sum[b, {a, 2, n^(1/3)}, {b, 2, (n/a)^(1/2)}] + Sum[b, {a, 2, n^(1/3)}, {b, 2, a}]
FK[11111]
43379
FM[n_] := Sum[Floor[n/(a b)], {a, 2, n^(1/3)}, {b, 1, (n/a)^(1/2)}] -
Sum[Floor[n/(a b)], {a, 2, n^(1/3)}, {b, 1, a}] -
Sum[b, {a, 2, n^(1/3)}, {b, 1, (n/a)^(1/2)}] + Sum[b, {a, 2, n^(1/3)}, {b, 1, a}]
FM[11111]
43379
Sum[b, {a, 2, Floor[n^(1/3)]}, {b, 1, a}]

```

$$\frac{1}{6} \left( -6 + 2 \text{Floor}\left[n^{1/3}\right] + 3 \text{Floor}\left[n^{1/3}\right]^2 + \text{Floor}\left[n^{1/3}\right]^3 \right)$$

**Sum**[ **b**, {**a**, 2, **n**<sup>^(1/3)</sup>}, {**b**, 1, **Floor**[(**n** / **a**)<sup>^(1/2)</sup>]}]

$$\sum_{a=2}^{\text{Floor}[n^{1/3}]} \sqrt{\frac{n}{a}} \sum_{b=1}^{\sqrt{\frac{n}{a}}} b$$

**Sum**[ **b**, {**b**, 1, **Floor**[(**n** / **a**)<sup>^(1/2)</sup>]}]

$$\frac{1}{2} \text{Floor}\left[\sqrt{\frac{n}{a}}\right] \left(1 + \text{Floor}\left[\sqrt{\frac{n}{a}}\right]\right)$$

**Sum**[ $\frac{1}{2} \text{Floor}\left[\sqrt{\frac{n}{a}}\right] \left(1 + \text{Floor}\left[\sqrt{\frac{n}{a}}\right]\right)$ , {**a**, 2, **n**<sup>^(1/3)</sup>}]

**FN**[**n**\_] := **Sum**[ **Floor**[**n** / (**a** **b**)], {**a**, 2, **n**<sup>^(1/3)</sup>}, {**b**, 1, (**n** / **a**)<sup>^(1/2)</sup>}] -  
**Sum**[ **Floor**[**n** / (**a** **b**)], {**a**, 2, **n**<sup>^(1/3)</sup>}, {**b**, 1, **a**}] -

**Sum**[ $\frac{1}{2} \text{Floor}\left[\sqrt{\frac{n}{a}}\right] \left(1 + \text{Floor}\left[\sqrt{\frac{n}{a}}\right]\right)$ , {**a**, 2, **n**<sup>^(1/3)</sup>}] +

$$\frac{1}{6} \left(-6 + 2 \text{Floor}[n^{1/3}] + 3 \text{Floor}[n^{1/3}]^2 + \text{Floor}[n^{1/3}]^3\right)$$

**FN**[11 111]

43 379

**FF**[11 111]

43 379

**FF**[123 321]

888 539

**FN**[123 321]

888 539