$$\frac{\pi^2}{6} - \frac{\pi^2}{6\,x}$$

```
ss[x_] := π^2/6 - π^2/(6 x)
```

```
ss[1 / 100]
```

$$-\frac{33\,\pi^2}{2}$$

```
Limit[ HarmonicNumber[x] - HarmonicNumber[x / I], {x → Infinity}]
```

$$\left\{\frac{i\,\pi}{2}\right\}$$

```
Limit[ HarmonicNumber[x] - HarmonicNumber[x I], {x → Infinity}]
```

$$\left\{-\frac{i\,\pi}{2}\right\}$$

```
N[HarmonicNumber[30 I]]
```

```
3.97851 + 1.55413 i
```

```
t[n_, a_] := Mod[n, a] - Mod[n - 1, a]
```

```
Sum[ N[t[n, 10 000] / n], {n, 10 000 000}]
```

```
9.20984
```

```
N[Log[10 000]]
```

```
9.21034
```

```
HarmonicNumber[-3.2]
```

```
5.90009
```

```
HarmonicNumber[100 000 000] - HarmonicNumber[100 000 000 / 10 000]
```

```
$Aborted
```

```
N[HarmonicNumber[1 000 000] - HarmonicNumber[1 000 000 / (E^2.5)]]
```

```
2.49999
```

```
Log[6.3]
```

```
1.84055
```

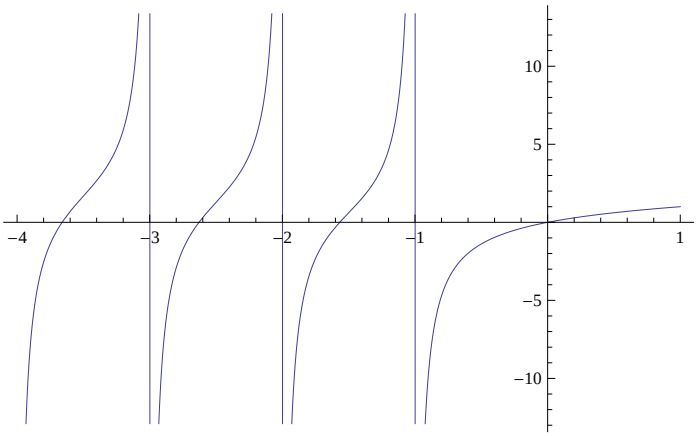
```
N[HarmonicNumber[100 000] - HarmonicNumber[100 000 / 6]]
```

```
1.79173
```

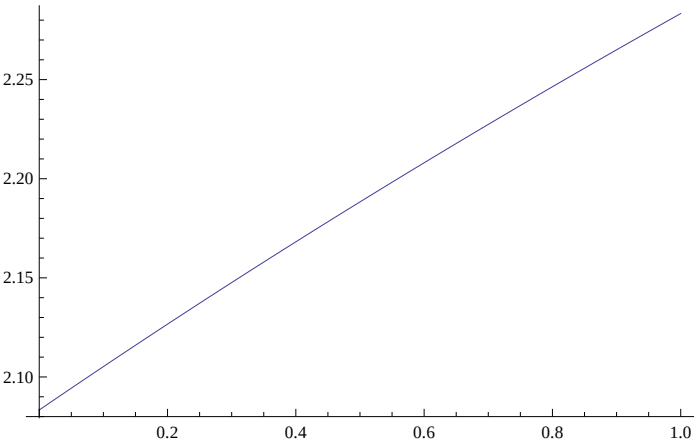
```
N[HarmonicNumber[100 000] - HarmonicNumber[100 000 / 7]]
```

```
1.94588
```

```
Plot[HarmonicNumber[n], {n, -4, 1}]
```




```
Plot[HarmonicNumber[4 + n], {n, 0, 1}]
```




```
N[HarmonicNumber[10 000] - HarmonicNumber[10 000 / (E^2.5)]]
```

```
2.49944
```

```
N[HarmonicNumber[-44.3] - HarmonicNumber[-44.3 / (E^2.5)]]
```

```
6.34967
```

```
N[HarmonicNumber[-44.3] - HarmonicNumber[-44.3 / (E^2.5)]]
```

```
N[HarmonicNumber[33 I]]
```

```
4.0738 + 1.55564 i
```