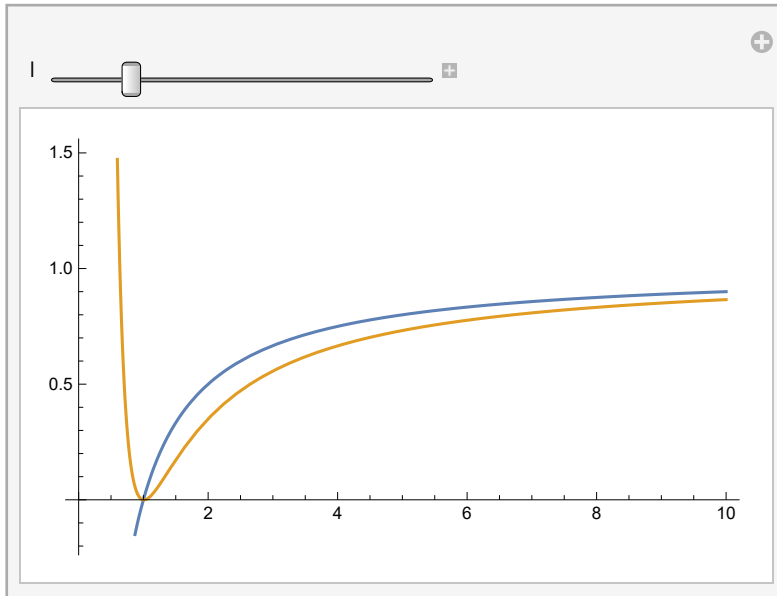


$$\left(1 - \frac{m}{r}\right) \left(1 - \frac{2\lambda}{(r^2)} \left(\frac{23r}{24m} + \left(\frac{11}{12}\right) + \frac{m}{r}\right)\right)$$

$$\left(1 - \frac{m}{r}\right) \left(1 - \frac{2 \left(\frac{11}{12} + \frac{m}{r} + \frac{23r}{24m}\right) \lambda}{r^2}\right)$$

`Manipulate[Plot[{ $1 - \frac{1}{r}$, $\left(1 - \frac{1}{r}\right) \left(1 - \frac{1 \left(\frac{23r}{24} + \frac{11}{12} + \frac{1}{r}\right)}{r^2}\right)$ }, {r, 0, 10}], {1, 0, 2}]`



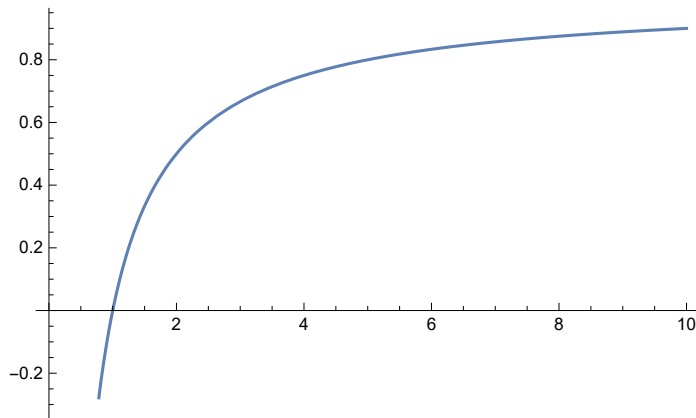
`Plot[$\left(1 - \frac{1}{r}\right)$, $\left(1 - \frac{1}{r}\right) \left(1 - \frac{1}{(r^2)} \left(\frac{23r}{24} + \left(\frac{11}{12}\right) + \frac{1}{r}\right)\right)$, {r, 0, 10}]`

`Plot::nonopt`: Options expected (instead of {r, 0, 10}) beyond position 2 in

`Plot[$1 - \frac{1}{r}$, $\left(1 - \frac{1}{r}\right) \left(1 - \frac{l (23 r \text{Power[<<2>>]} + 11 \text{Power[<<2>>]} + 1 \text{Power[<<2>>])}}{\text{Power[<<2>>]}}\right)$, {r, 0, 10}]`. An option must be a rule or a list

of rules. >>

Plot $\left[\left\{ 1 - \frac{1}{r}, \left(1 - \frac{1}{r} \right) \left(1 - \frac{1 \left(\frac{23r}{24} + \frac{11}{12} + \frac{1}{r} \right)}{r^2} \right) \right\}, \{r, 0, 10\} \right]$



Solve $\left[\left(1 - \frac{1}{r} \right) \left(1 - \frac{1 \left(\frac{23r}{24} + \frac{11}{12} + \frac{1}{r} \right)}{r^2} \right) = 0, 1 \right]$

$\left\{ \left\{ 1 \rightarrow \frac{24 r^3}{24 + 22 r + 23 r^2} \right\} \right\}$

$\frac{24}{24 + 22 + 23}$ // N

0.347826

0.34782608695652173^{-1}

2.875

E^{-1} // N

0.367879

$\frac{24}{(24 + 23 + 22 + 21 + 20 + 19 + 18 + 17 + 16 + 15 + 14 + 13 + 12 + 11 + 10 + 9 + 8 + 7 + 6 + 5 + 4 + 3 + 2 + 1)}$ // N

0.08

0.08^{-1}

12.5

$24 + 23 + 22 + 21 + 20 + 19 + 18 + 17 + 16 + 15 + 14 + 13 + 12 + 11 + 10 + 9 + 8 + 7 + 6 + 5 + 4 + 3 + 2 + 1$

300

$300 / 24$

$\frac{25}{2}$

2

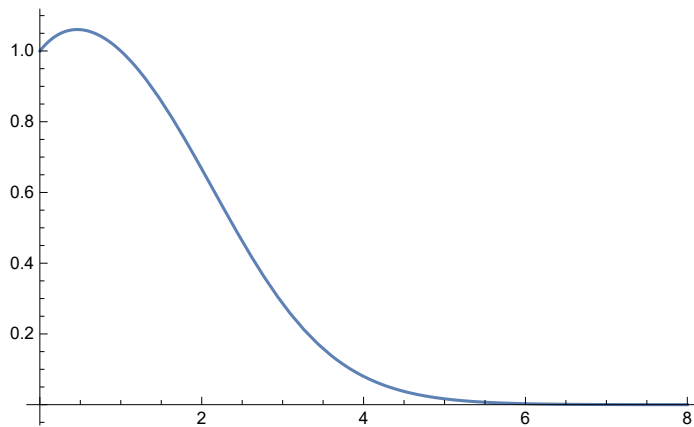
$$25 (24) / 2$$

$$300$$

$$\frac{2 (4!)}{(4!) ((4!) + 1)}$$

$$\frac{2}{25}$$

$$\text{Plot}\left[\frac{2 (n!)}{(n!) ((n!) + 1)}, \{n, 0, 8\}\right]$$



$$D\left[\frac{2 (n!)}{(n!) ((n!) + 1)}, n\right]$$

$$-\frac{2 \Gamma[1+n] \text{PolyGamma}[0, 1+n]}{(1+n!)^2}$$

$$\text{Solve}\left[-\frac{2 \Gamma[1+n] \text{PolyGamma}[0, 1+n]}{(1+n!)^2} == 0, n\right]$$

Solve::nsmet: This system cannot be solved with the methods available to Solve. >>

$$\text{Solve}\left[-\frac{2 \Gamma[1+n] \text{PolyGamma}[0, 1+n]}{(1+n!)^2} == 0, n\right]$$

$$-\frac{2 \Gamma[1+n] \text{PolyGamma}[0, 1+n]}{(1+n!)^2} /. n \rightarrow 0.34782608695652173`$$

$$0.0579444$$

$$\text{EulerGamma} // N$$

$$0.577216$$

$$E^{-1} // N$$

$$0.367879$$

$$- \frac{2 \Gamma[1+n] \text{PolyGamma}[0, 1+n]}{(1+n!)^2} /. n \rightarrow (E^{-1}) // N$$

0.0472578