

$$\pi r^2 + \frac{2\pi}{h} \int_0^a x r + (h s - x s) dx = \frac{2\pi}{h} \int_a^h x r + (h - x) s dx$$

$$0.0004 \pi + 20. \pi (-0.01000000000 a^2 + 0.004000000000 a) = 20. \pi (0.0003000000000$$

$$+ 0.01000000000 a^2 - 0.004000000000 a)$$

$$\rightarrow$$

$$[a = 0.3612451550], [a = 0.03875484503] \rightarrow [a = 0.03875484503] \rightarrow a = 0.03875484503 \rightarrow$$

$$0.03875484503 \rightarrow \text{Error, (in plots/interactiveparams) invalid arguments} \rightarrow$$

$$\rightarrow [a = 0.3612451550] \rightarrow a = 0.3612451550 \rightarrow 0.3612451550 \rightarrow \text{Error, (in}$$

$$\text{plots/interactiveparams) invalid arguments} \rightarrow \rightarrow$$

$$\frac{1}{h} \int_0^a (x r + (h - x) s)^2 \pi dx = \frac{1}{h} \int_a^h (x r + (h - x) s)^2 \pi dx$$

$$0.004188790205 a^3 - 0.002513274123 a^2 + 0.0005026548246 a = 0.004188790205 f^3$$

$$- 0.004188790205 a^3 - 0.002513274123 f^2 + 0.002513274123 a^2 + 0.0005026548246 f$$

$$- 0.0005026548246 a$$

$$\rightarrow$$

$$[[a = 0.1000000000 (-8. + 500. f^3 - 300. f^2 + 60. f)^{1/3} + 0.2000000000], [a = -0.05000000000 (-8. + 500. f^3 - 300. f^2 + 60. f)^{1/3}$$

$$+ 0.2000000000], [a = -0.05000000000 (-8. + 500. f^3 - 300. f^2 + 60. f)^{1/3}$$

$$- 0.08660254038 I (-8. + 500. f^3 - 300. f^2 + 60. f)^{1/3} + 0.2000000000]]$$

$$\rightarrow [a = 0.1000000000 (-8. + 500. f^3 - 300. f^2 + 60. f)^{1/3} + 0.2000000000] \rightarrow$$

$$a = 0.1000000000 (-8. + 500. f^3 - 300. f^2 + 60. f)^{1/3} + 0.2000000000 \rightarrow 0.1000000000 (-8.$$

$$+ 500. f^3 - 300. f^2 + 60. f)^{1/3} + 0.2000000000$$

$$\frac{1}{-r + s} \left(\frac{1}{2} (4 s^3 f^3 + 12 s^3 h^2 f - 12 s^3 h f^2 - 8 h^3 s^3 - 12 s^2 r f^3 - 12 s^2 h^2 f r + 24 s^2 h r f^2$$

$$+ 12 s r^2 f^3 - 12 s h r^2 f^2 - 4 r^3 f^3)^{1/3} + h s \right)$$

$$=$$

$$25.00000000 (0.00003200000000 f^3 + 0.000003840000000 f - 0.00001920000000 f^2$$

$$- 5.120000000 10^{-7})^{1/3} + 0.2000000000$$

$$= 0.7937005260 ((f - 0.4000000000) (f^2 - 0.2000000000 f + 0.04000000001))^{1/3} + 0.2000000000$$

$$\rightarrow 0.7937005260 \sqrt[3]{(f - 0.4000000000) (f^2 - 0.2000000000 f + 0.04000000001)}$$

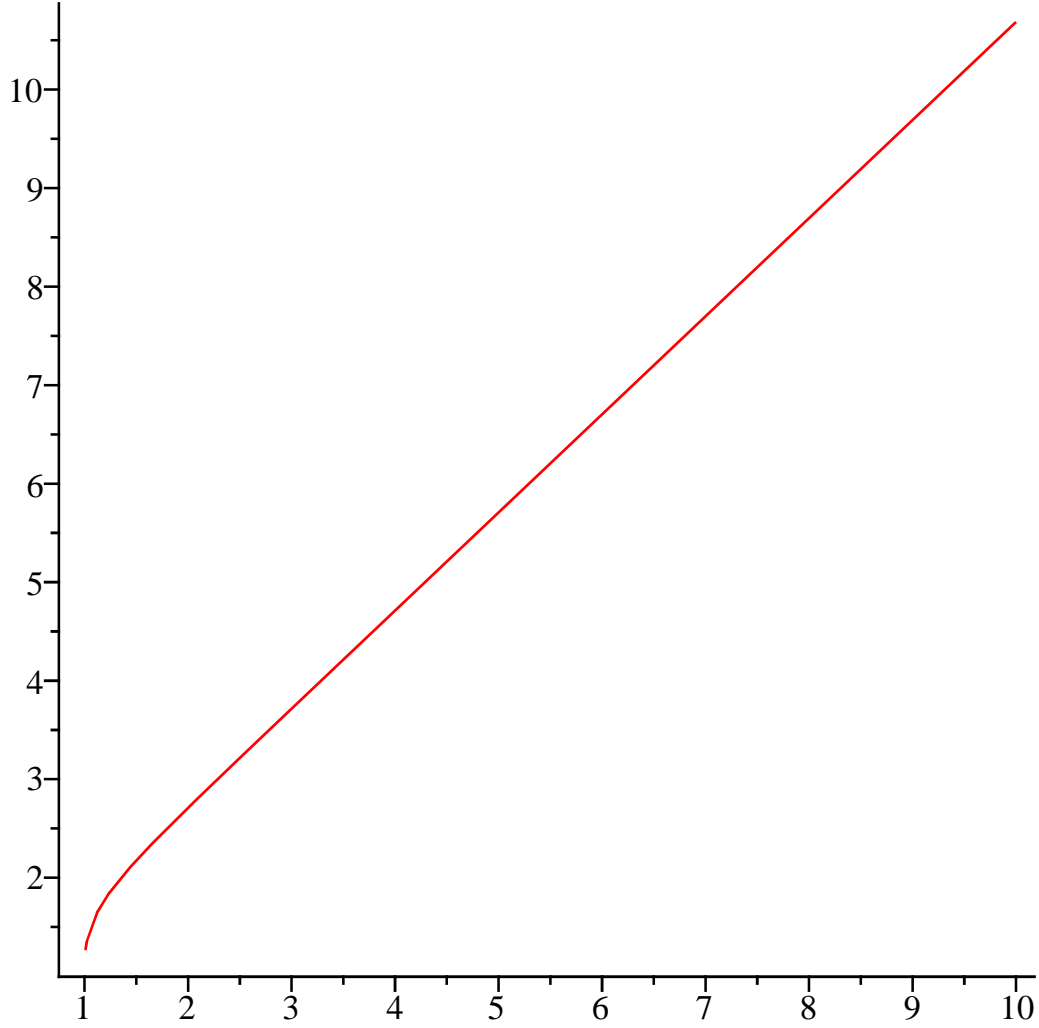
$$+ 0.2000000000$$

$$25.00000000 (0.000032 f^3 + 0.00000384 f - 0.0000192 f^2 - 5.12 10^{-7})^{1/3} + 0.2000000000$$

$$\sqrt[3]{x^3 + x - x^2 - 1} + 1$$

$$(x^3 + x - x^2 - 1)^{1/3} + 1$$

→



$$\frac{1}{m + \rho \left(\frac{1}{3} \pi f (r^2 + s^2 + r + s) \right)} \left(m \cdot \left(\frac{1}{2} \frac{2 h s - \sqrt{2 h^2 s^2 - 2 r^3 h + 2 r^2 h^2 + 2 s r^2 h}}{-r + s} \right) \right. \\ \left. + \rho \left(\frac{1}{3} \pi f (r^2 + s^2 + r + s) \right) \cdot \frac{1}{-r + s} \left(\frac{1}{2} (4 s^3 f^3 + 12 s^3 h^2 f - 12 s^3 h f^2 - 8 h^3 s^3 \right. \right. \\ \left. \left. - 12 s^2 r f^3 - 12 s^2 h^2 f r + 24 s^2 h r f^2 + 12 s r^2 f^3 - 12 s h r^2 f^2 - 4 r^3 f^3) ^{1/3} + h s \right) \right) \\ \frac{1}{0.1 + \frac{1}{3} \pi f (0.0620)} \left(0.003875484502 + 16.666666667 \pi f (0.0620) \left(\frac{1}{2} (0.000032 f^3 \right. \right. \\ \left. \left. + 0.00000384 f - 0.0000192 f^2 - 5.12 \cdot 10^{-7}) ^{1/3} + 0.004 \right) \right) \quad (5)$$

$$\tan(\theta) = r$$



$$\left(\frac{1}{m + \frac{1}{3} \rho \pi f (r^2 + s^2 + r + s)} \left(\frac{1}{2} \frac{m (2 h s - \sqrt{2 h^2 s^2 - 2 r^3 h + 2 r^2 h^2 + 2 s r^2 h})}{-r + s} \right. \right. \\ \left. \left. + \frac{1}{3} \frac{1}{-r + s} \left(\rho \pi f (r^2 + s^2 + r + s) \left(\frac{1}{2} (4 f^3 s^3 + 12 h^2 s^3 f - 12 h s^3 f^2 - 8 h^3 s^3 \right. \right. \right. \right. \\ \left. \left. \left. - 12 r s^2 f^3 - 12 r h^2 s^2 f + 24 r h s^2 f^2 + 12 r^2 f^3 s - 12 r^2 h s f^2 - 4 f^3 r^3) \right)^{1/3} + h s \right) \right) \right) \\ \tan(\theta) = \left(0.02 \left(0.1 + \frac{1}{3} \pi f(0.0620) \right) \right) / \left(0.003875484502 \right. \quad (6)$$

$$\left. + 16.66666667 \pi f(0.0620) \left(\frac{1}{2} (0.000032 f^3 + 0.00000384 f - 0.0000192 f^2 \right. \right. \\ \left. \left. - 5.12 \cdot 10^{-7})^{1/3} + 0.004 \right) \right)$$

→

$$\left[\left[\theta = \arctan \left(\left(3.333333333 \cdot 10^8 \left(3. + 31.41592654 f \left(\frac{31}{500} \right) \right) \right) / \left(1.937742251 \cdot 10^9 \right. \right. \right. \right. \\ \left. \left. \left. + 1.308996939 \cdot 10^{13} f \left(\frac{31}{500} \right) (0.00003200000000 f^3 + 0.000003840000000 f \right. \right. \right. \right. \\ \left. \left. \left. - 0.00001920000000 f^2 - 5.120000000 \cdot 10^{-7})^{1/3} + 1.047197551 \cdot 10^{11} f \left(\frac{31}{500} \right) \right) \right] \right]$$

→

$$\left[\theta = \arctan \left(\left(3.333333333 \cdot 10^8 \left(3. + 31.41592654 f \left(\frac{31}{500} \right) \right) \right) / \left(1.937742251 \cdot 10^9 \right. \right. \right. \right. \\ \left. \left. \left. + 1.308996939 \cdot 10^{13} f \left(\frac{31}{500} \right) (0.00003200000000 f^3 + 0.000003840000000 f \right. \right. \right. \right. \\ \left. \left. \left. - 0.00001920000000 f^2 - 5.120000000 \cdot 10^{-7})^{1/3} + 1.047197551 \cdot 10^{11} f \left(\frac{31}{500} \right) \right) \right]$$

→

$$\theta = \arctan \left(\left(3.333333333 \cdot 10^8 \left(3. + 31.41592654 f \left(\frac{31}{500} \right) \right) \right) / \left(1.937742251 \cdot 10^9 \right. \right. \right. \right. \\ \left. \left. \left. + 1.308996939 \cdot 10^{13} f \left(\frac{31}{500} \right) (0.00003200000000 f^3 + 0.000003840000000 f \right. \right. \right. \right. \\ \left. \left. \left. - 0.00001920000000 f^2 - 5.120000000 \cdot 10^{-7})^{1/3} + 1.047197551 \cdot 10^{11} f \left(\frac{31}{500} \right) \right) \right)$$

$$\rightarrow \backslash \theta = \backslash \arctan \backslash \left(\quad 333333333.3 \backslash , \{ \backslash \frac { 3.0+ 31.41592654 \backslash , f } \right. \\ \left. \backslash \left(\{ \backslash \frac { 31 } { 500 } \} \backslash \right) \} \{ 1937742251.0+ 13089969390000.0 \backslash , f \right. \\ \left. \backslash \left(\{ \backslash \frac { 31 } { 500 } \} \backslash \right) \sqrt [3] { 0.00003200000000 \backslash , \{ f \} ^ { 3 } } \right. \\ \left. + 0.000003840000000 \backslash , f - 0.00001920000000 \backslash , \{ f \} ^ { 2 } - 0.0000005120000000 \} \right. \\ \left. + 104719755100.0 \backslash , f \backslash \left(\{ \backslash \frac { 31 } { 500 } \} \backslash \right) \} \} \backslash \right) \\ r := 0.02$$

$$0.02 \quad (7)$$

$$s := 0.04$$

$$0.04 \quad (8)$$

$$h := 0.1$$

$$0.1 \tag{9}$$

$$m := 0.1$$

$$0.1 \tag{10}$$

$$\rho := 1000$$

$$1000 \tag{11}$$

$$\begin{aligned} & -\arctan\left(\left(2 r\left(3 r m+r \rho \pi f\left(r^2+s^2+r+s\right)-3 s m-s \rho \pi f\left(r^2+s^2+r+s\right)\right)\right) / \left(6 m h s\right.\right. \\ & \quad \left.\left.-3 m \sqrt{2 h^2 s^2-2 r^3 h+2 r^2 h^2+2 s r^2 h}+\rho \pi f\left(r^2+s^2+r+s\right)\left(4 f^3 s^3+12 h^2 s^3 f\right.\right.\right. \\ & \quad \left.\left.-12 h s^3 f^2-8 h^3 s^3-12 r s^2 f^3-12 r h^2 s^2 f+24 r h s^2 f^2+12 r^2 f^3 s-12 r^2 h s f^2-4 f^3 r^3\right)^{1 / 3}\right. \\ & \quad \left.\left.+2 \rho \pi f\left(r^2+s^2+r+s\right) h s\right)\right) \\ & -\arctan\left(\left(0.04\left(-0.006-20.00 \pi f(0.0620)\right)\right) / \left(0.000465058140\right.\right. \\ & \quad \left.\left.+1000 \pi f(0.0620)\left(0.000032 f^3+0.00000384 f-0.0000192 f^2-5.12 10^{-7}\right)^{1 / 3}\right.\right. \\ & \quad \left.\left.+8.000 \pi f(0.0620)\right)\right) \end{aligned} \tag{12}$$

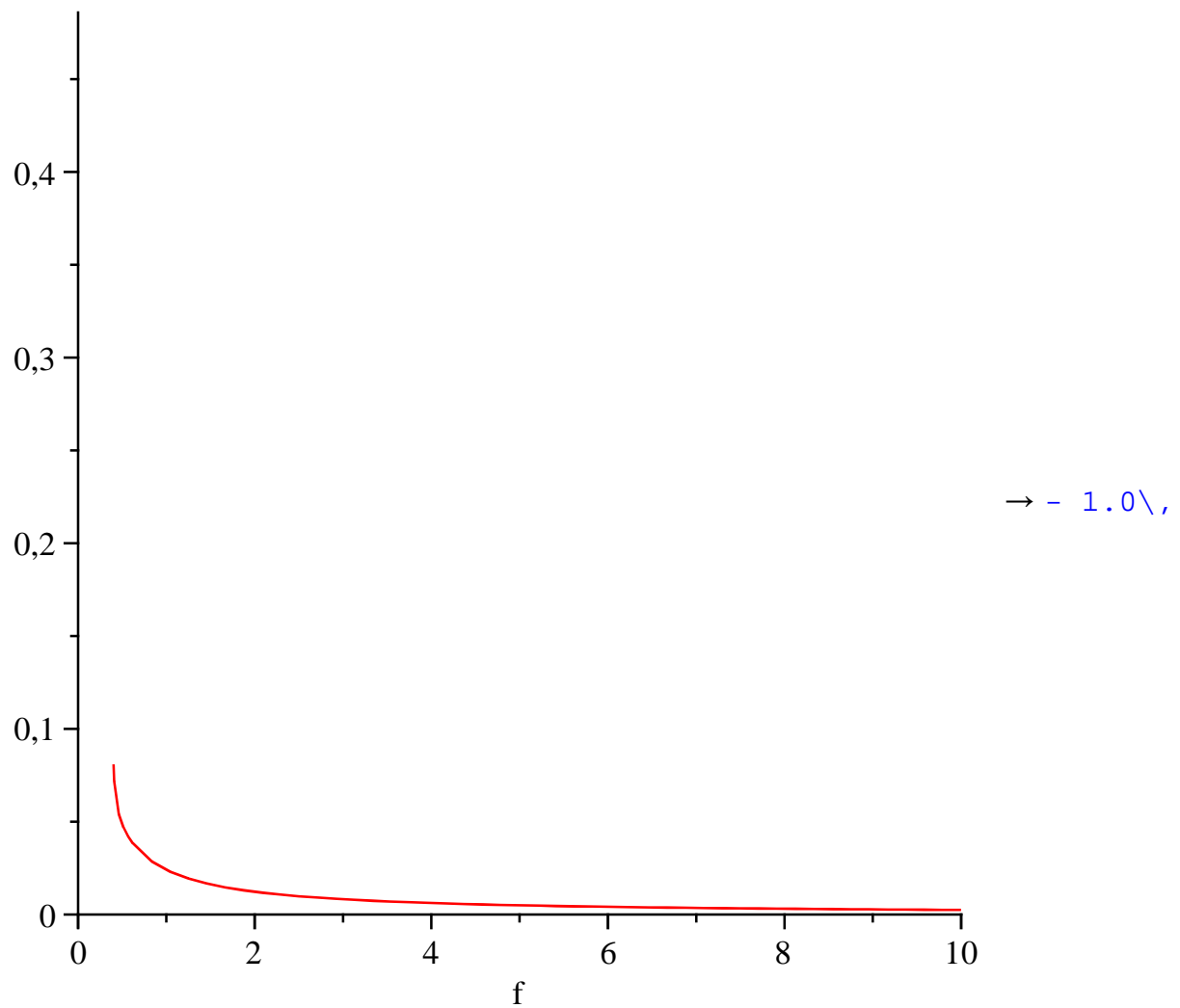
→

$$\begin{aligned} & -1. \arctan\left(\left(0.04\left(-0.006-62.832 f(0.0620)\right)\right) / \left(0.00046506+3141.6 f(0.0620)\left(0.000032 f^3\right.\right.\right. \\ & \quad \left.\left.+0.00000384 f-0.0000192 f^2-5.12 10^{-7}\right)^{1 / 3}+25.133 f(0.0620)\right)\right) \end{aligned}$$

→

$$\begin{aligned} f \rightarrow & -1. \arctan\left(\left(0.04\left(-0.006-62.832 f(0.0620)\right)\right) / \left(0.00046506+3141.6 f(0.0620)\left(0.000032 f^3\right.\right.\right. \\ & \quad \left.\left.+0.00000384 f-0.0000192 f^2-5.12 10^{-7}\right)^{1 / 3}+25.133 f(0.0620)\right)\right) \end{aligned}$$

→ Error, (in IssueError) cannot resolve types in {numeric, void} →



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\arctan \left( 0.04\,,{\frac {- 0.006- 62.832\,,f \left( 0.0620
\right) }}{ 0.00046506+ 3141.6\,,f \left( 0.0620 \right) \sqrt [3]{
0.000032\,,{f}^{\{3\}+ 0.00000384\,,f- 0.0000192\,,{f}^{\{2\}- 0.000000512\}+
25.133\,,f \left( 0.0620 \right) }}} \right)

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