Lektion 1Error, unexpected number

$\frac{2}{7}$

$$\frac{2}{7} \tag{1}$$

$\frac{14}{35}$

$$\frac{2}{5} \tag{2}$$

$\frac{2}{7} \cdot 28$

$$8 \tag{3}$$

$70!$

$$11978571669969891796072783721689098736458938142546425857555360\backslash\\ 286462800958278984531968000000000000000 \tag{4}$$

$700!$

$$24220401247502721798678750938123522185909833857292072994506790\backslash\\ 664929938160215647420444519051666484819249321456671497049800\backslash\\ 423275250938748173438383937576314592284508284999722712741400\backslash\\ 016031105783055846363633712407933244782073928110103711266500\backslash\\ 387537180790257577919273108262916904750405235055060084012200\backslash\\ 194928923756351362966220200231781096198180461799068974504200\backslash\\ 054891261087058908805650391358456221103769328878296090019500\backslash\\ 074130999799035970711436279339094292032866260496375825461400\backslash\\ 277275557100030077529061414706395743900249885149142644498600\backslash\\ 500645887322695194189954597033391035158855923294082956927600\backslash\\ 986080222200289966128343931630028789203382654749603473516300\backslash\\ 147652627722571711546867168628141847287411871479363495016500\backslash\\ 319745745566041313450604912204494705262338468208886479067300\backslash\\ 309569292384215611788014274954905914148362303226200246816400\backslash\\ 413019348460802549986473252706061045120880587122933498621800\backslash\\ 539924330905429957638171880624723819523260464261432989407000\backslash\\ 636163753672091232751612378348273840757873567717532879242500\backslash\\ 183371195406029436094116293490095660437208367374010908823900\backslash\\ 297503122461253124564268729671705374773450644331492455811900\backslash\\ 560479901478736209556925161517737110399754730551854066328400\backslash\\ 200147286578962869365237870802064763271571364413187734327500\backslash\\ 100726310805695825169381128095724320246015711177861747268300\backslash\\ 761623869704457588005158037495665069625778930898095725794700\backslash\\ 107016392382315281155796191202873786892389343351985086659300\backslash$

391725714397527770759059751198934506870173594016967256186\
4\
713107115016747368992690116082633762172346688969840862517\
2\
643840000000000000000000000000000000000000000000000000000\
0\
000000000000000000000000000000000000000000000000000000000\
0\
000000000000000000000000000000000000000000000000000000000\
0\
00000

$$\frac{70!}{2^{70}\cdot 5}+1$$

1623399178481834189844191775499716923872759147239110688809419\ **(6)**
9144756805419921883/8

numerisch

$$\frac{2.0}{7.0}$$

0.2857142857 **(7)**

$$evalf\left(\frac{2}{7},200\right)$$

0.2857142857142857142857142857142857142857142857142857142857\ **(8)**
4285714285714285714285714285714285714285714285714285714285\
7142857142857142857142857142857142857142857142857142857142\
8571428571428571428571429

$$evalf(\mathrm{Pi},1000)$$

3.1415926535897932384626433832795028841971693993751058209749\ **(9)**
4592307816406286208998628034825342117067982148086513282306\
6470938446095505822317253594081284811174502841027019385211\
0555964462294895493038196442881097566593344612847564823378\
6783165271201909145648566923460348610454326648213393607260\
2491412737245870066063155881748815209209628292540917153643\
6789259036001133053054882046652138414695194151160943305727\
0365759591953092186117381932611793105118548074462379962749\
5673518857527248912279381830119491298336733624406566430860\
2139494639522473719070217986094370277053921717629317675238\
4674818467669405132000568127145263560827785771342757789609\
1736371787214684409012249534301465495853710507922796892589\
2354201995611212902196086403441815981362977477130996051870\
7211349999998372978049951059731732816096318595024459455346\
9083026425223082533446850352619311881710100031378387528865\
8753320838142061717766914730359825349042875546873115956286\
3882353787593751957781857780532171226806613001927876611195\
909216420199

$$9\cdot 10864.0^4\ -18817.0^4+2\cdot 18817.0^2$$

$$8.1589780\,10^{6} \quad (10)$$

$Digits := 20$

$$20 \quad (11)$$

$9 \cdot 10864.0^4 \quad -18817.0^4 + 2 \cdot 18817.0^2$

$$1.00 \quad (12)$$

$Digits := 10$

$$10 \quad (13)$$

$9 \cdot 10864^4 \quad -18817^4 + 2 \cdot 18817^2$

$$1 \quad (14)$$

$evalf(2 \cdot \mathrm{Pi}, 20)$

$$6.2831853071795864770 \quad (15)$$

Variable

$f := (a-b)^2$

$$(a-b)^2 \quad (16)$$

f

$$(a-b)^2 \quad (17)$$

$a := 5$

$$5 \quad (18)$$

f

$$(5-b)^2 \quad (19)$$

a

$$5 \quad (20)$$

$b := 7$

$$7 \quad (21)$$

f

$$4 \quad (22)$$

$a := 'a'$

$$a \quad (23)$$

a

$$a \quad (24)$$

f

$$(a-7)^2 \quad (25)$$

$a := 5; b := 5$

$$5$$

$$5 \quad (26)$$

$f := (a-b)^2$

$$0 \quad (27)$$

$a := 4$

$$4 \quad (28)$$

f

$$0 \quad (29)$$

sqrt(81)

$$9 \quad (30)$$

sqrt(-81)

$$9\,I \quad (31)$$

I^2

$$-1 \quad (32)$$

sqrt(243)

$$9\sqrt{3} \quad (33)$$

sqrt($9 \cdot x^2$)

$$3\sqrt{x^2} \quad (34)$$

Pi

$$\pi \quad (35)$$

$\sin\left(\frac{\text{Pi}}{2}\right)$

$$1 \quad (36)$$

$\cos\left(\frac{\text{Pi}}{2}\right)$

$$0 \quad (37)$$

$\tan\left(\frac{\text{Pi}}{2}\right)$

Error, (in tan) numeric exception: division by zero

arccot(1)

$$\frac{1}{4}\,\pi \quad (38)$$

$a := \text{Pi}; b := \text{pi}$

$$\pi$$

$$\pi \quad (39)$$

sin(a)

$$0 \quad (40)$$

sin(b)

$$\sin(\pi) \quad (41)$$

omega

$$\omega \quad (42)$$

Alpha

$$A \quad (43)$$

Alpha = A

$$A = A \quad (44)$$

evalb(Alpha = A)

$$\textit{false} \quad (45)$$

a, b

$$\pi, \pi \tag{46}$$

lprint(*a*, *b*)

Pi, pi

exp(1)

$$e \tag{47}$$

e

$$e \tag{48}$$

log(exp(1))

$$1 \tag{49}$$

log(*e*)

$$\ln(e) \tag{50}$$

$f := (x-y)\cdot(x+y)$

$$(x-y)\ (x+y) \tag{51}$$

expand(*f*)

$$x^2 - y^2 \tag{52}$$

factor($x^2 - y^2$)

$$(x-y)\ (x+y) \tag{53}$$

$g := \dfrac{(x^2-y^2)}{x-y}$

$$\frac{x^2-y^2}{x-y} \tag{54}$$

normal(*g*)

$$x+y \tag{55}$$

simplify(*g*)

$$x+y \tag{56}$$

$f := \dfrac{(\sin(2\cdot x)+\cos(x))}{(\sin(2\cdot x)^2-\cos(x)^2)\cdot(\sin(2\cdot x)-\cos(x))}$

$$\frac{\sin(2\,x)+\cos(x)}{(\sin(2\,x)^2-\cos(x)^2)\ (\sin(2\,x)-\cos(x))} \tag{57}$$

expand(*f*)

$$\frac{2\sin(x)\cos(x)}{(4\sin(x)^2\cos(x)^2-\cos(x)^2)\ (2\sin(x)\cos(x)-\cos(x))} + \frac{\cos(x)}{(4\sin(x)^2\cos(x)^2-\cos(x)^2)\ (2\sin(x)\cos(x)-\cos(x))} \tag{58}$$

normal(*f*)

$$\frac{1}{(\sin(2\,x)-\cos(x))^2} \tag{59}$$

normal(*f*, *expanded*)

$$\frac{1}{4\sin(x)^2\cos(x)^2-4\sin(x)\cos(x)^2+\cos(x)^2} \tag{60}$$

factor(*f*)

$$\frac{1}{(\sin(2\,x)-\cos(x))^2} \tag{61}$$

simplify(f)

$$-\frac{1}{(4\cos(x)^2+4\sin(x)-5)\cos(x)^2} \tag{62}$$