

Uygenitkghcwhi cdgp "6<Mqghk kpvpgdguvko o wpi "hA"i cp| tcvkqpcng "Hwpmkqpgp"
aa
"

Dgkf gt "Mqghk kpvpgdguvko o wpi "j cpf gn'gu'ulej "wo "gkpg"Wo ngj twpi "f gt "Mwxgpf kumwukqo'
Cwu'xqti gi gdgpgp "Gki gpuej chvgp "gkpgu"i tcr j gp "uqmgp "f kg "Mqghk kpvpgp" "c_p : "c_{p/3} : "c_{p/4} : "i . "c₃ : "c₂"
f gt " wi gj ¾ki gp "Hwpmkqpui nglej wpi "f(x) = a_nxⁿ + a_{n-1}xⁿ⁻¹ + a_{n-2}xⁿ⁻² + ... + a₁x + a₀"
dguvko o v'y gtf gp0'

Lgf g "kphqto cvkqp" Adgt "f kg"i guwej vg "Hwpmkqp"y kf "kp" gkpg "i nglej wpi "wo i gugv v0Uq "gpwvgj v'gkp"
I nglej wpi uu{uvg0' f kgugu"i nglej wpi uu{uvg0' "o wuu"i gpcw'uq'xkrg "i nglej wpi gp "gpv cngp"y kg"
wpdgnppvg "Mqghk kpvpgp" w'dguvko o gp "ukp f0F cu"gpwcpf gpg'rkpgctg "i nglej wpi uu{uvg0' "napp"
f cpp" | D0o k'f go "VT" *O QF G'7+"qf gt "f go "Cf f kkpuxgthcj tgp"i gn'v'y gtf gp0'
"

O ¾ nlej g'kphqto cvkqpgp "w'f "kj tg"Wo ugv wpi <"

- dgrkdki g "Rwpmg" f gu"i tcr j gp "P (x|y)"
z/"w'f "{/Y gt v'kp "f kg" cni go gkpg "Hwpmkqpui nglej wpi " *{ ? h*z +" gkpugv gp"
- tgr0J qej / "w'f "Vlgr wpmg" *Gz vgo r wpmg+"
F gp "z/Y gt v'kp "f kg" 30C dngkwpi "f gt" cni go gkpg "Hwpmkqpui nglej wpi "gkpugv gp. "f gt gp"
Gti gdpku'pwn'y gtf gp "o wuu0'
- Y gpf gr wpmg"
F gp "z/Y gt v'kp "f kg" 40C dngkwpi "gkpugv gp. "f gt gp" Gti gdpku'P wn'y gtf gp "o wuu0"
- Ucwgr wpmg"
F gp "z/Y gt v'kqy qj n'kp "f kg" 30cnu'cwej "kp "f kg" 40C dngkwpi "gkpugv gp. "f kg" lgy gku'P wn'gti gdgp"
o Aaugp0"
- Uvgki wpi gp "f gu"i tcr j gp "d| y 0Vcpi gpvpgvugki wpi gp"
F gp "z/Y gt v'kp "f kg" 30C dngkwpi "gkpugv gp. "f gt gp" Gti gdpku"i nglej "f go "Uvgki wpi uy gt v'ugkp"
o wuu0'
- U{o o gvkkgki gpuej chvgp " *i CU'd| y 02RU+
Tgf w' kgtwpi "f gt" cni go gkpg "Hwpmkqpui nglej wpi "w'f "f co k'T gf w' kgtwpi "f gt" Cp| cj n'f gt " | w"
dguvko o gpf gp "Mqghk kpvpgp" < dgk'Cej ugpu {o o gvk'pwt "i n'kf gt "o k'v' gtcf gp "Gzr qpgvpgp" w'f "
cduqmwgu"i n'kf . "dgk' Rwpmu {o o gvk'pwt "i n'kf gt "o k'v' wpi gtcf gp "Gzr qpgvpgp" w'f "n'kp" cd/
uqmwgu"i n'kf 0'
"
"
"
"

Dgkur kgn"

I guwej v'kuv'gkpg'i cp| tcvkqpcrg'Hwpmkqp'50I tcf gu0Ukg'uqm'cp'f gt'Uvgmg'x = -1" gkpgp'Gzvtgo / y gtv'wpf 'ko 'Rwpm'+ (0|4)"gkpgp'Y gpf gr wpm'j cdgp0F kg' wi gj 3/4ki g'Y gpf gvcpj gpvg'j cvf kg' Uvgki wpi "-6'0'

F kg'cni go gkpg'Hwpmkqpui nglej wpi "C @; ¥; fi& · fi@Ÿ; - "š±°; ° ° a-š°¶

$$f(x) = ax^3 + bx^2 + cx + d$$

"

Cdngkwpi gp"

$$f'(x) = 3ax^2 + 2bx + c$$

$$f''(x) = 6ax + 2b$$

Rwpm'+ (0|4)"

$$f(0) = a \cdot 0^3 + b \cdot 0^2 + c \cdot 0 + d = 4 \Rightarrow d = 4$$

Y gpf gr wpm'+ (0|4)

$$f''(0) = 6a \cdot 0 + 2b = 0 \Rightarrow 2b = 0 \Rightarrow b = 0$$

"

Gzvtgo y gtv'x = -1"

$$f'(-1) = 3a \cdot (-1)^2 + 2b \cdot (-1) + c = 0 \Rightarrow 3a - 2b + c = 0$$

Uvgki wpi 'f gt'Y gpf gvcpj gpvg'm = -6.'f g 0Uvgki wpi 'ko 'Y gpf gr wpm'+ (0|4)'kuv"-6"

$$f'(0) = 3a \cdot 0^2 + 2b \cdot 0 + c = -6 \Rightarrow c = -6$$

b = 0"wpf "c = -6"lp"kkk'gkpgv' gp<"

$$3a - 2 \cdot 0 - 6 = 0 \Rightarrow 3a - 6 = 0 \Rightarrow 3a = 6 \Rightarrow a = 2$$

"

F kg'gto kvngngp'Mqghk' kpgv'p'ugv' gp'y k'lp'f gp'Cpucv' "gkpg<

$$f(x) = 2x^3 + 0x^2 - 6x + 4$$

$$f(x) = 2x^3 - 6x + 4$$

rcwgv'f kg'i guwej vg'Hwpmkqpui nglej wpi 0