



قائمة الاسئلة 2025-04-26 06:09

لغة برمجة-(203204)-الثالث -فيزياء-كليةالعلوم- درجة الامتحان (70)

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- 1) $N[expr]$:
 - 1) $+$ gives the numerical value of $expr$.
 - 2) $-$ gives the numerical value of $expr$ with n -digit precision.
 - 3) $-$ gives the value of the property for $expr$.
 - 4) $-$ prints as the definitions given for a $expr$.
- 2) $Table[expr, \{i, i_max\}]$
 - 1) $+$ generates a list of the values of $expr$ when i runs from 1 to i_max
 - 2) $-$ generates a list of n copies of $expr$.
 - 3) $-$ format the $expr$ in one dimension as table
 - 4) $-$ Nothing
- 3) What does $Table[x^2, \{x, 3\}]$ produce?
 - 1) $+$ $\{1, 4, 9\}$
 - 2) $-$ $\{x^2, x^2, x^2\}$
 - 3) $-$ $\{3, 6, 9\}$
 - 4) $-$ $\{1, 2, 3\}$
- 4) How do you compute the square root of 16 in Mathematica?
 - 1) $+$ $Sqrt[16]$
 - 2) $-$ $Power[16, 2]$
 - 3) $-$ $Root[16]$
 - 4) $-$ $Squared[16]$
- 5) What is the output of $Range[5]$?
 - 1) $+$ $\{1, 2, 3, 4, 5\}$
 - 2) $-$ $\{0, 1, 2, 3, 4, 5\}$
 - 3) $-$ $\{0, 1, 2, 3, 4\}$
 - 4) $-$ $\{1, 4, 9, 16, 25\}$
- 6) Which function plots a 2D graph in Mathematica?
 - 1) $+$ $Plot[]$
 - 2) $-$ $Graph[]$
 - 3) $-$ $Draw[]$
 - 4) $-$ $Show[]$
- 7) What does $Total[\{2, 4, 6\}]$ return?
 - 1) $+$ 12
 - 2) $-$ 6
 - 3) $-$ $\{2, 4, 6\}$
 - 4) $-$ 24
- 8) How do you define a function $f(x) = x^2$ in Mathematica?
 - 1) $+$ $f[x] := x^2$ or $f[x_] := x^2$
 - 2) $-$ $f(x) = x^2$
 - 3) $-$ $Function[x^2]$
 - 4) $-$ $Define[f, x^2]$
- 9) What is the result of $ListPlot[\{1, 4, 9, 16\}]$?
 - 1) $+$ A line plot of the points (1,1), (2,4), (3,9), (4,16)
 - 2) $-$ A table of values
 - 3) $-$ A bar chart
 - 4) $-$ A 3D surface plot



- 10) Which function solves an equation like $x^2 - 4 == 0$?
- 1) ☒ Solve[$x^2 - 4 == 0$, x]
 - 2) ☐ FindRoot[$x^2 - 4 == 0$]
 - 3) ☐ EquationSolve[$x^2 - 4 == 0$]
 - 4) ☐ Root[$x^2 - 4$]
- 11) What does PrimeQ[7] return?
- 1) ☒ True
 - 2) ☐ 7
 - 3) ☐ {2, 3, 5, 7}
 - 4) ☐ False
- 12) How do you generate 5 random integers between 1 and 10?
- 1) ☒ Table[RandomInteger[{1, 10}], 5]
 - 2) ☐ RandomSample[Range[10], 5]
 - 3) ☐ RandomReal[{1, 10}, 5]
 - 4) ☐ RandomInteger[5, 10]
- 13) What does `# /. #2 & @@ {x + y, {x -> 1, y -> 2}}` evaluate to ?
- 1) ☒ 3
 - 2) ☐ 1 + 2
 - 3) ☐ x + y
 - 4) ☐ {x -> 1, y -> 2}
- 14) Which expression flattens a nested list `{{1, {2}}, {3, {4, 5}}}` to `{1, 2, 3, 4, 5}`?
- 1) ☒ Flatten[`{{1, {2}}, {3, {4, 5}}}`]
 - 2) ☐ Flatten[`{{1, {2}}, {3, {4, 5}}}`, 1]
 - 3) ☐ Flatten[`{{1, {2}}, {3, {4, 5}}}`, 0]
 - 4) ☐ Level[`{{1, {2}}, {3, {4, 5}}}`, {1}]
- 15) How many times will the following while loop print "Hello"?
`x = 5;`
`while(x > 1) { print("Hello"); x = x - 1; }`
- 1) ☒ 4
 - 2) ☐ 1
 - 3) ☐ 6
 - 4) ☐ 5
- 16) What will be the value of x after executing the following pseudo codes
- a) `x = 9; x == 8;`
- b) `x = 9; x = 7;`
- 1) ☒ 9, 7
 - 2) ☐ 8, 7
 - 3) ☐ 8, 9
 - 4) ☐ 9, 9
- 17) What is the result of the following expression?
`( 5 < 8 ) && ( 3 > 1 ) .`
Where && is logical AND operator



- 1) ☒ TRUE.
2) ☐ FALSE.
3) ☐ Undefined
4) ☐ None
- 18) What will be the value of z after the following code?
 $x = 4;$
 $y = 3;$
 $z = x * y + 2$
- 1) ☒ 14
2) ☐ 12
3) ☐ 16
4) ☐ 4
- 19) List[e1,e2,e3] :
 1) ☒ is {e1,e2,e3}
 2) ☐ is {{e1,e2,e3}}
 3) ☐ is {{e1},{e2},{e3}}
 4) ☐ None of them
- 20) Convert the following pseudo codes to Mathematica Statments
 $i=1;$
 Loop:
 $i = i + 1;;$
 print i;
 if $i \leq 10$ then { continue : (Loop)};
- print i;
- 1) ☒ For[i = 1, i <= 10, i++, Print[i]]
 2) ☐ For[i = 1, i < 10, i++, Print[i]]
 3) ☐ For[i = 1, i == 10, i++, Print[i]]
 4) ☐ Do[i = 1, i <= 10, i++, Print[i]]
- 21) Table[i! , {i, 5}]
 where "n!" gives the factorial of n
- 1) ☒ {1, 2, 6, 24, 120}
 2) ☐ {1, 2, 3, 4, 5}
 3) ☐ {2, 4, 6, 8, 10}
 4) ☐ {1!, 2!, 3!, 4!, 5!}
- 22) MatrixForm[RandomInteger[{10, 15}, {3, 3}]]
- 1) ☒
$$\begin{pmatrix} 14 & 14 & 13 \\ 12 & 14 & 15 \\ 14 & 15 & 10 \end{pmatrix}$$
- 2) ☐ -



$$\begin{pmatrix} 3 & 14 & 14 \\ 5 & 17 & 10 \\ 21 & 23 & 15 \end{pmatrix}$$

3) -

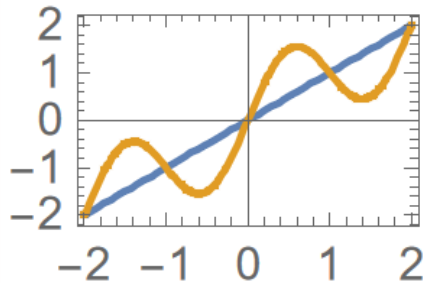
$$\begin{pmatrix} 16 & 4 & 6 \\ 11 & 15 & 22 \\ 19 & 8 & 24 \end{pmatrix}$$

4) -

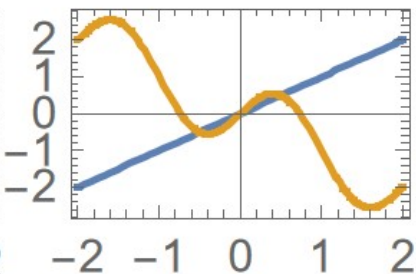
$$\begin{pmatrix} 10 & 11 & 7 \\ 15 & 5 & 7 \\ 12 & 8 & 7 \end{pmatrix}$$

23) Plot[{x, x + Sin[x \[Pi]]}, {x, -2, 2}, Frame -> True]

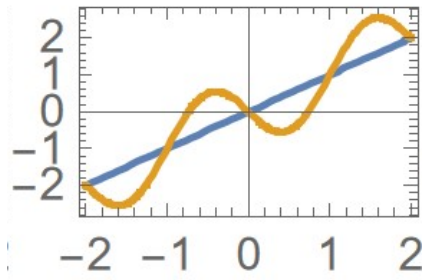
1) +



2) -



3) -



4)

