

■ 1 Budowa notatnika

Cell -> Grouping -> Manual Grouping

Section

Format -> Style -> Section

■ Subsection

Format -> Style -> Subsection

■ Subsubsection

Format -> Style -> Subsubsection

Laczenie komorek (cells) :

Cell -> Grouping -> Group Cells/...

Zamiana kodu na tekst

Format -> Style -> Text

■ 2. Wprowadzanie wyrazen

In[1]:= 2 + 2

Out[1]= 4

Operacje zatwierdzamy klawiszami **Shift + Enter**

In[2]:= 2 × 3

Out[2]= 6

Spacja oznacza mnozenie (piszac program **nie uzywac bialych znakow** jesli nie jest to wymagane)

■ 3. Wykorzystanie poprzednich obliczen

In[12]:= 3 + 4

Out[12]= 7

```
In[13]:= 3 %
```

```
Out[13]= 21
```

```
In[14]:= %% - 7
```

```
Out[14]= 0
```

```
In[15]:= %% + 1
```

```
Out[15]= 22
```

```
In[16]:= %%% - 1
```

```
Out[16]= 20
```

```
In[17]:= %16 2
```

```
Out[17]= 40
```

```
Out[16] 2 (* == %16 2 *)
```

```
Out[24]= 40
```

ponowne obliczenie :

```
In[20]:= In[17]
```

```
Out[20]= 40
```

■ 4. Sekwencje operacji

```
In[18]:= a = 7; b = 3; a + b
```

```
Out[18]= 10
```

```
In[19]:= a = 7; b = 3; a + b; a - b
```

```
Out[19]= 4
```

■ 5. Zapis wyrazen w innych formatach

w formacie tekstowym :

```
In[25]:= TextForm[a = 8; c = a - 7; b = 3]
```

```
Out[25]/TextForm=
3
```

```
In[26]:= TextForm["a=8;c=a-7;b=3"]
```

```
Out[26]/TextForm=
a=8; c=a-7; b=3
```

w formacie T_EX-a :

```
In[27]:= TeXForm["a=8;c=a-7;b=3"]
```

```
Out[27]/TeXForm=
\text{a=8;c=a-7;b=3}
```

w formacie języka Fortran :

```
In[31]:= FortranForm[1.3 x + Sin[3 x]]
```

```
Out[31]/FortranForm=
1.3*x + Sin(3*x)
```

```
In[33]:= FortranForm[1.3 x^2 + Exp[3 x]]
```

```
Out[33]/FortranForm=
E**(3*x) + 1.3*x**2
```

w formacie języka C :

```
In[34]:= CForm[1.3 x + Sin[3 x]]
```

```
Out[34]/CForm=
1.3*x + Sin(3*x)
```

```
In[36]:= CForm[1.3 x^2 + Exp[3 x]]
```

```
Out[36]/CForm=
Power(E,3*x) + 1.3*Power(x,2)
```

■ 6. Przerywanie obliczeń

```
In[50]:= a = 2; b = 3; For[i = 0, i > -1, a = a + b; b = b - a; i++]
```

```
Out[50]= $Aborted
```

Przerywanie obliczeń : **Alt + .** lub **Alt +,**

■ 7. Informacje o obiektach

```
In[52]:= ?For
```

For[start, test, incr, body] executes start, then repeatedly evaluates body and incr until test fails to give True. >>

```
In[53]:= ?? For
```

For[start, test, incr, body] executes start, then repeatedly evaluates body and incr until test fails to give True. >>

```
Attributes[For] = {HoldAll, Protected}
```

```
In[55]:= ?? If
```

If[condition, t, f] gives t if condition evaluates to True, and f if it evaluates to False.

If[condition, t, f, u] gives u if condition evaluates to neither True nor False. >>

```
Attributes[If] = {HoldRest, Protected}
```

```
In[57]:= ? Ve*
```

▼ System*

VectorAngle	VerifyConvergence
VectorColorFunction	VerifySolutions
VectorColorFunctionScaling	Version
VectorDensityPlot	VersionNumber
VectorGlyphData	VertexColors
VectorPlot	VertexCoordinateRules
VectorPlot3D	VertexLabeling
VectorPoints	VertexNormals
VectorQ	VertexRenderingFunction
VectorScale	Vertical
VectorStyle	VerticalBar
Vee	VerticalForm
Verbatim	VerticalSeparator
Verbose	VerticalSlider
VerboseConvertToPostScriptPacket	VerticalTilde

■ 8. Pakiety

Pewne funkcje przed ich uruchomieniem wymagaja wczytania pakietow :

```
In[2]:= << VectorAnalysis`
```

```
In[3]:= SetCoordinates [Cartesian [x, y, z]] (*SetCoordinates [Cartesian]*)
```

```
Out[3]= Cartesian [x, y, z]
```

Iloczyn wektorowy

```
In[5]:= A := {Ax, Ay, Az}; B := {Bx, By, Bz}
```

```
In[6]:= Cross[A, B]
```

```
Out[6]= {-Az By + Ay Bz, Az Bx - Ax Bz, -Ay Bx + Ax By}
```

```
In[7]:= << PrimalityProving`
```

```
In[13]:= ProvablePrimeQ [773]
```

```
Out[13]= True
```

```
In[16]:= ProvablePrimeQ [771]
```

```
Out[16]= False
```

■ 9. Palety i odsylacze

Palettes -> Other -> Basic Math Input

In[18]:= **Det** $\begin{bmatrix} 1 & 0 \\ 0 & 2 \end{bmatrix}$

Out[18]= 2

Insert -> Table/Matrix -> New ...

In[22]:= $\begin{pmatrix} 12 & 3 & 34 \\ 13 & 5 & 26 \\ 2 & 1 & 7 \end{pmatrix}$

Out[22]= {{12, 3, 34}, {13, 5, 26}, {2, 1, 7}}

In[23]:= **Det** [%]

Out[23]= 93

In[25]:= $e^{i\pi} + 1$

Out[25]= 0

In[27]:= $\sum_{i=1}^{33} \frac{1}{i} // \mathbf{N}$

Out[27]= 4.0888

Odsylacze:

Utworzyc nowy notebook z kilkoma prostymi operacjami

Utworz i zaznacz nazwe odsylacza

In[31]:= **NotebookA**

Out[31]= NotebookA

wybierz: Insert -> Hiperlink a nastepnie w oknie wybrac utworzony notebook

mgr Andrzej Pisarski