



COMPUTAÇÃO EM NUVEM PARA WEB I

**Aula 07 - CMD - Operações
Aritméticas**

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CMD – Operações Aritméticas

Variáveis:

- + Operações matemáticas;

- Operadores
- Cálculo simples e composto
- Operadores de atribuição
- Múltiplas variáveis numéricas

- + Variáveis de ambiente

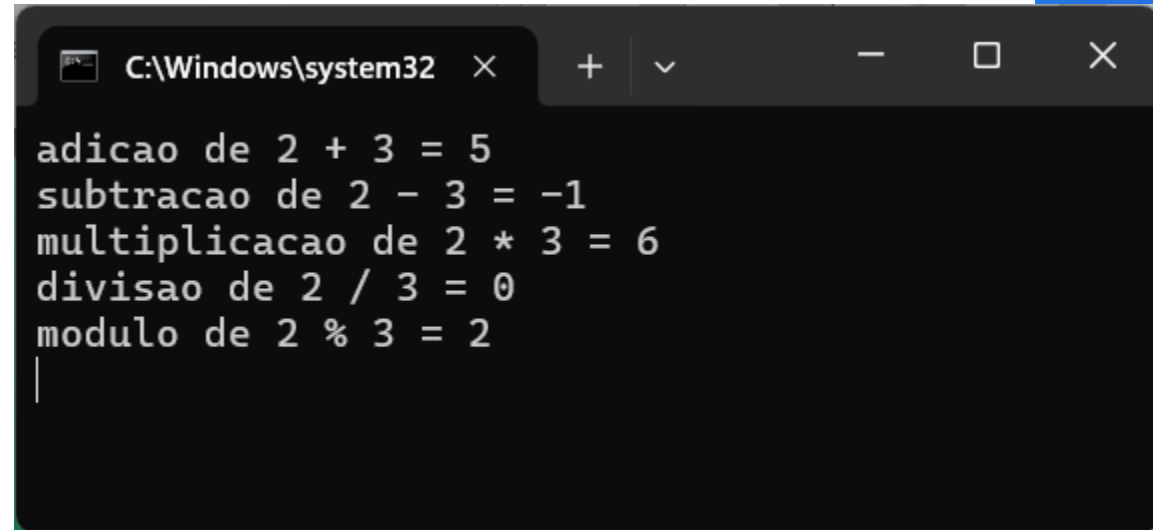
- Alcance de usuário e de sistema.

Operadores

- + → soma
- → subtração
- * → multiplicação
- / → divisão
- % → módulo(resto da divisão)

Operadores

```
1  @echo off
2
3  set /a adicao=2+3
4  set /a subtracao=2-3
5  set /a multiplicacao=2*3
6  set /a divisao=2/3
7  set /a modulo=2%%3
8
9  echo adicao de 2 + 3 = %adicao%
10 echo subtracao de 2 - 3 = %subtracao%
11 echo multiplicacao de 2 * 3 = %multiplicacao%
12 echo divisao de 2 / 3 = %divisao%
13 echo modulo de 2 % 3 = %modulo%
14
15 pause >nul
```

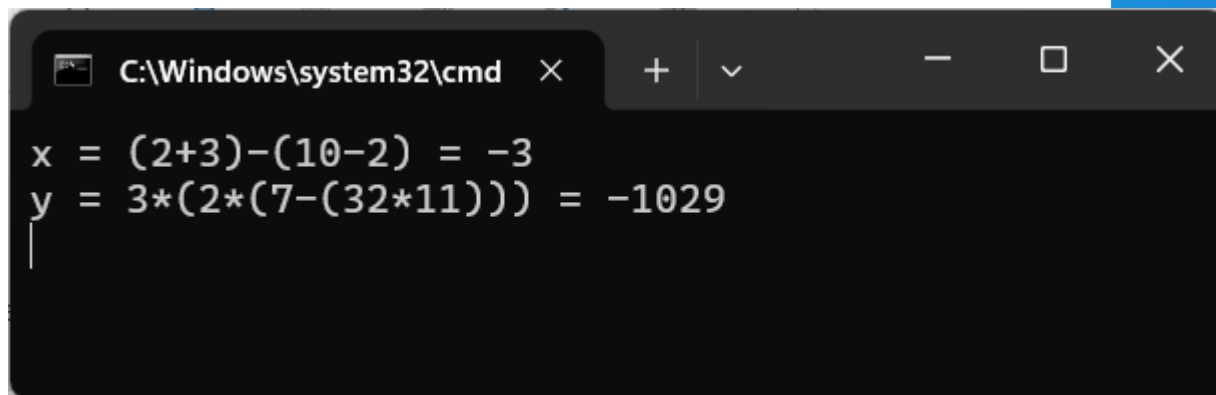


A screenshot of a Windows command prompt window. The title bar shows the path 'C:\Windows\system32' and standard window controls. The command prompt displays the output of the batch script: 'adicao de 2 + 3 = 5', 'subtracao de 2 - 3 = -1', 'multiplicacao de 2 * 3 = 6', 'divisao de 2 / 3 = 0', and 'modulo de 2 % 3 = 2'. A cursor is visible on the line following the last output.

```
C:\Windows\system32
adicao de 2 + 3 = 5
subtracao de 2 - 3 = -1
multiplicacao de 2 * 3 = 6
divisao de 2 / 3 = 0
modulo de 2 % 3 = 2
|
```

Cálculo simples e composto

```
1  @echo off
2
3  set /a x=(2+3)-(10-2)
4  set /a y=3*(2+(7-(32*11)))
5
6
7  echo x = (2+3)-(10-2) = %x%
8  echo y = 3*(2*(7-(32*11))) = %y%
9
10 pause >nul
```



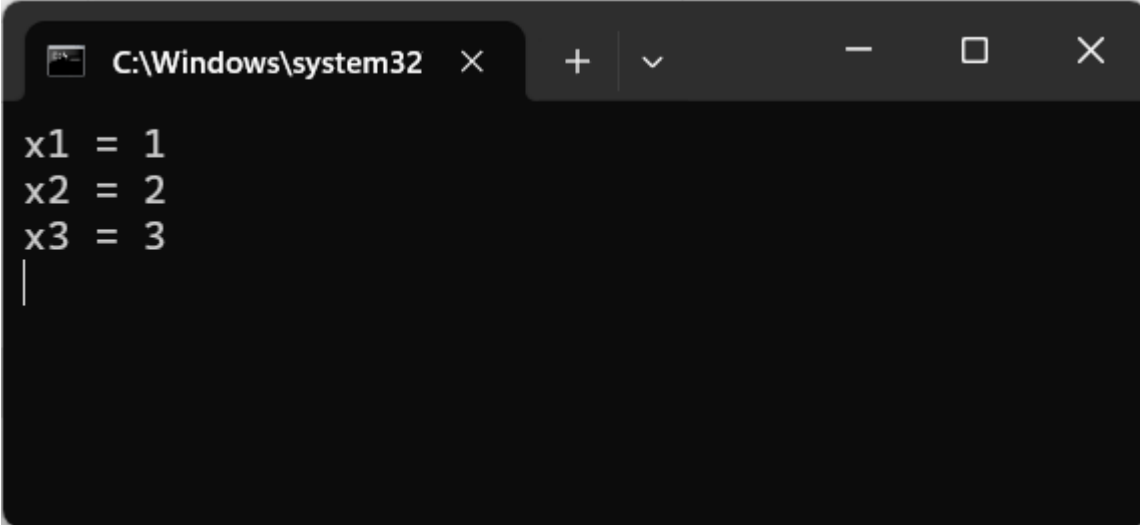
```
C:\Windows\system32\cmd x + v - □ ×
x = (2+3)-(10-2) = -3
y = 3*(2*(7-(32*11))) = -1029
```

Operadores do Batch Script

- () → agrupamento
- / + - % → operadores aritméticos
- << >> → alternância lógica
- = *= /+ %= += -= → atribuição
- , → separador de expressões

Múltiplas variáveis numéricas

```
1  @echo off
2
3  set /a x1=1, x2=2, x3=3
4
5  echo x1 = %x1%
6  echo x2 = %x2%
7  echo x3 = %x3%
8
9  pause >nul
```

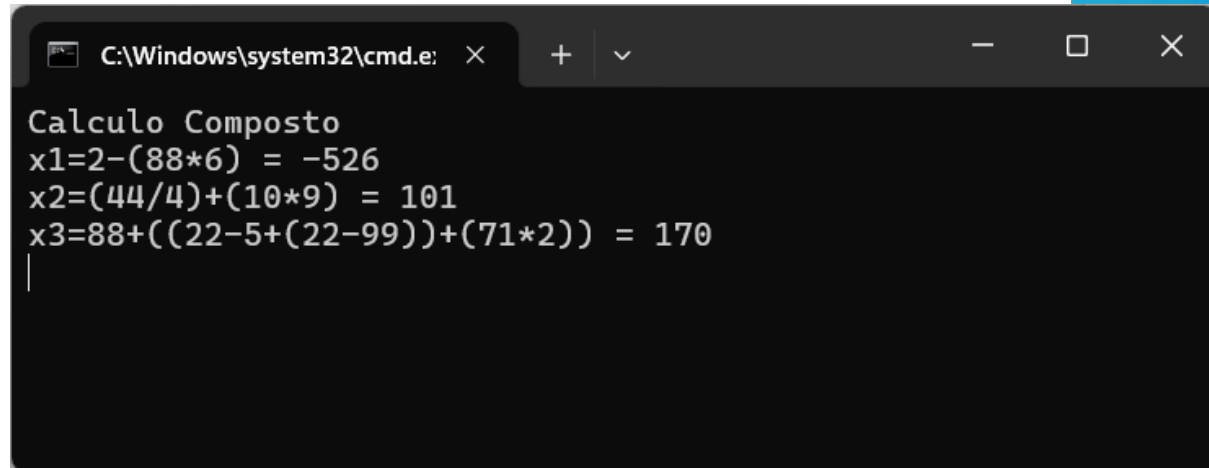


A screenshot of a Windows command prompt window. The title bar shows the path 'C:\Windows\system32' and standard window controls. The command prompt displays the output of the batch script: 'x1 = 1', 'x2 = 2', and 'x3 = 3' on separate lines. A cursor is visible on the line following the last output.

```
C:\Windows\system32
x1 = 1
x2 = 2
x3 = 3
|
```

Cálculo Composto

```
1  @echo off
2
3  set /a x1=2-(88*6), x2=(44/4)+(10*9), x3=88+((22-5+(22-99))+(71*2))
4
5  echo Calculo Composto
6
7  echo x1=2-(88*6) = %x1%
8  echo x2=(44/4)+(10*9) = %x2%
9  echo x3=88+((22-5+(22-99))+(71*2)) = %x3%
10
11 pause >nul
```

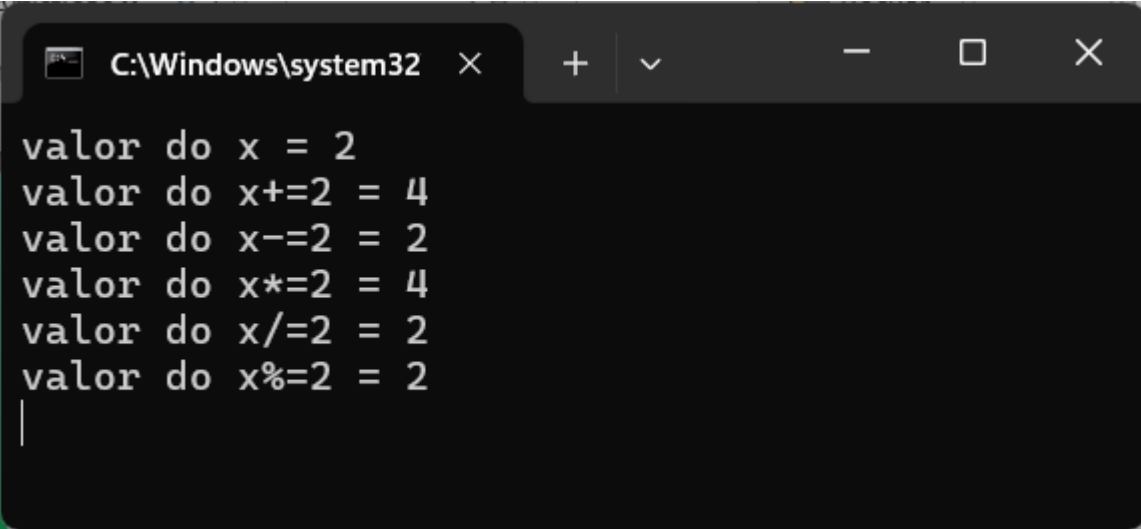


The screenshot shows a Windows Command Prompt window with the title bar "C:\Windows\system32\cmd.e:". The window displays the output of the batch script, which includes the title "Calculo Composto" and the calculated values for x1, x2, and x3. The output is as follows:

```
Calculo Composto
x1=2-(88*6) = -526
x2=(44/4)+(10*9) = 101
x3=88+((22-5+(22-99))+(71*2)) = 170
```

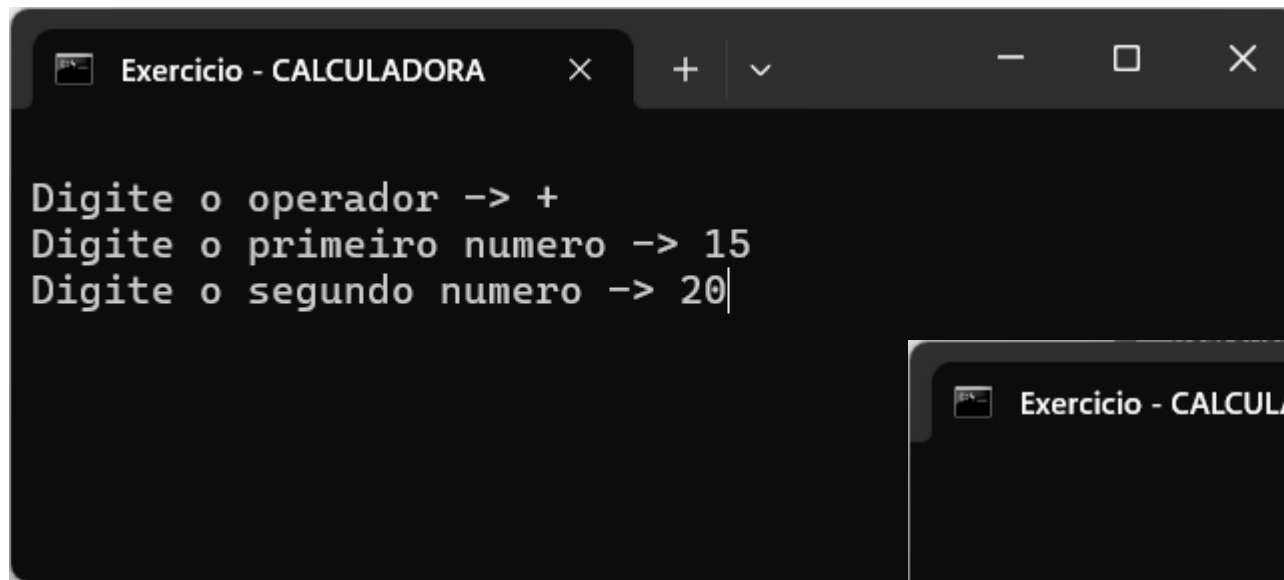

Operadores de Atribuição

```
1  @echo off
2  ::Operadores de Atribuição
3
4  set /a x=2
5  echo valor do x = %x%
6  set /a x+=2
7  echo valor do x+=2 = %x%
8  set /a x-=2
9  echo valor do x-=2 = %x%
10 set /a x*=2
11 echo valor do x*=2 = %x%
12 set /a x/=2
13 echo valor do x/=2 = %x%
14 set /a x%=2
15 echo valor do x%=2 = %x%
16
17 pause >nul
```

A screenshot of a Windows command prompt window. The title bar shows the path 'C:\Windows\system32' and standard window controls. The command prompt displays the output of the batch script, showing the value of 'x' at each step: 'valor do x = 2', 'valor do x+=2 = 4', 'valor do x-=2 = 2', 'valor do x*=2 = 4', 'valor do x/=2 = 2', and 'valor do x%=2 = 2'. A cursor is visible at the end of the last line.

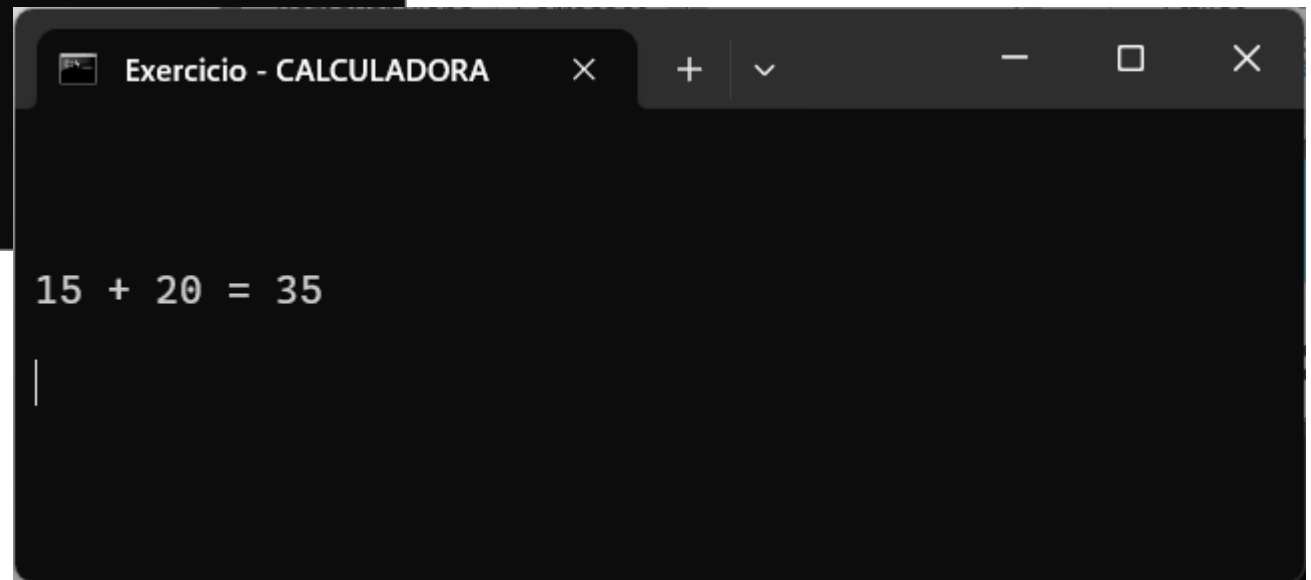
```
C:\Windows\system32
valor do x = 2
valor do x+=2 = 4
valor do x-=2 = 2
valor do x*=2 = 4
valor do x/=2 = 2
valor do x%=2 = 2
|
```

Exercício Calculadora Simples



```
Exercicio - CALCULADORA
```

Digite o operador -> +
Digite o primeiro numero -> 15
Digite o segundo numero -> 20|

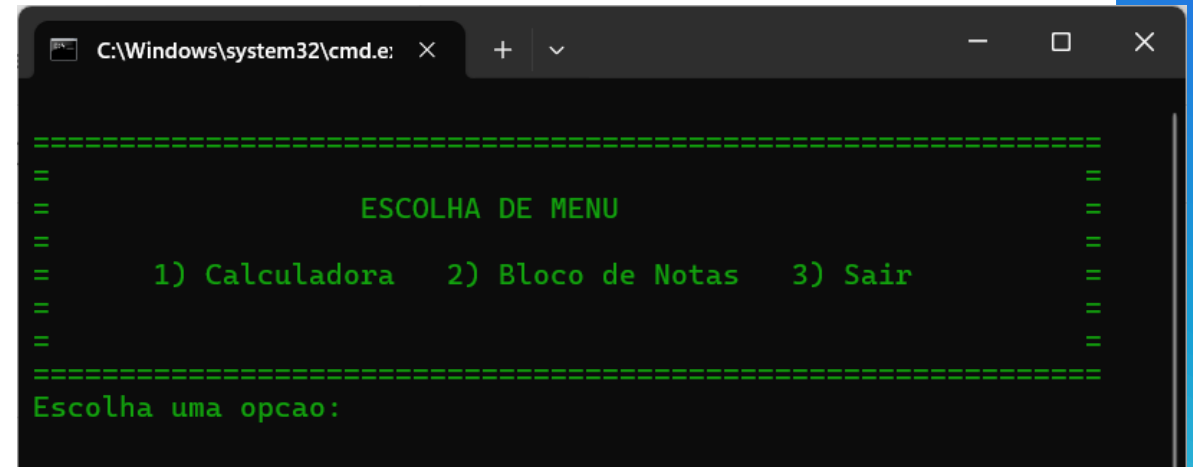


```
Exercicio - CALCULADORA
```

15 + 20 = 35
|

Extra – Criando Menus

```
1  @echo off
2  color 02
3
4  :interface
5  cls
6  echo:
7  echo =====
8  echo =
9  echo =          ESCOLHA DE MENU          =
10 echo =
11 echo =      1) Calculadora   2) Bloco de Notas   3) Sair
12 echo =
13 echo =
14 echo =====
15
16 choice /c "123" /n /m "Escolha uma opcao:"
17 goto %errorlevel%
18
19 :1
20 start calc.exe
21 goto interface
22
23 :2
24 start notepad.exe
25 goto interface
26
27 :3
28 exit
29
30 pause >nul
```



```
C:\Windows\system32\cmd.e:  X  +  v  -  □  X

=====
=
=          ESCOLHA DE MENU          =
=
=      1) Calculadora   2) Bloco de Notas   3) Sair
=
=
=
=====
Escolha uma opcao:
```