Excel
Time Functions

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DEPARTAMENTO **CIÊNCIA**
E TECNOLOGIA

UNIVERSIDADE PORTUCALENSE

CONTENT

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Example operations

- Obtain the difference between dates

- Obtain the difference between times

- Obtain the number of working days between dates

- Extract information:
    - Date:
        - Day
        - Month
        - Year
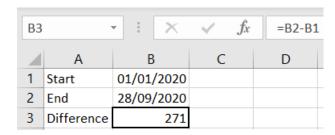   - Time
        - Hours
        - Minutes
        - Seconds

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Date and time representation

- Positive real number
    - Integer: date
    - Decimal: time

- 1 = January 1st,1900 at 00H00M
    - Dates before 1/1/1900 are not valid
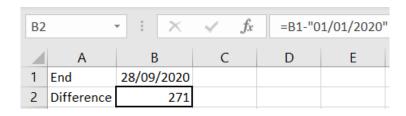- 2 = January 2nd,1900 at 00H00M

…

- 44102 = September 28th,2020 at 00H00M

- 44102,25 = September 28th,2020 at 06H00M
- 44102,50 = September 28th,2020 at 12H00M
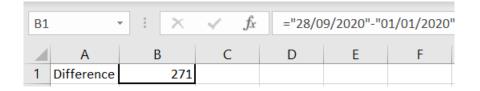- 44102,66 = September 28th,2020 at 15H50M

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Difference between dates

B3				f_x	=B2-B1

	A	B	C	D
1	Start	01/01/2020		
2	End	28/09/2020		
3	Difference	**271**		

Format B3 as "General", otherwise the result will be 27/09/1900 (the 271st day after 01/01/1900)

B2				f_x	=B1-"01/01/2020"

	A	B	C	D	E
1	End	28/09/2020			
2	Difference	**271**			

Dates need to be inserted inside quotation marks

Any date format is allowed. Ex:

- 01/01/2020
- 01-jan-2020

B1				f_x	="28/09/2020"-"01/01/2020"

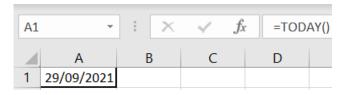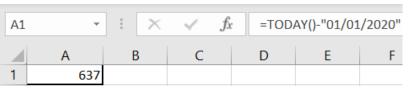|	A	B	C	D	E	F
1	Difference	**271**				

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TODAY()

Function that returns the current date

Difference between today's date and 01/01/2020

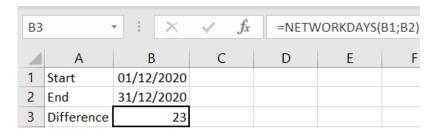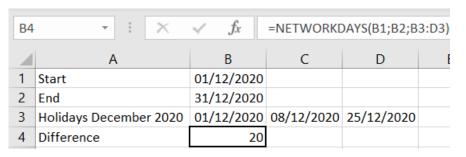
* Slides made on 29/09/2021 at 17:15

NETWORKDAYS

Obtain the number of working days between two dates. May consider holidays.

Not considering holidays

B3			× ✓ f_x	=NETWORKDAYS(B1;B2)		
	A	B	C	D	E	F
1	Start	01/12/2020				
2	End	31/12/2020				
3	Difference	23				

Considering holidays

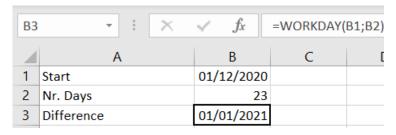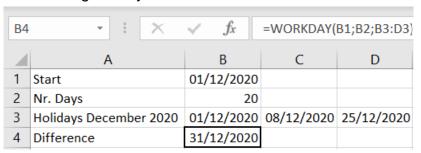| B4			× ✓ f_x	=NETWORKDAYS(B1;B2;B3:D3)	
	A	B	C	D
1	Start	01/12/2020		
2	End	31/12/2020		
3	Holidays December 2020	01/12/2020	08/12/2020	25/12/2020
4	Difference	20		

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WORKDAY

From a start date and a number of working days, determine the final date. May consider holidays.
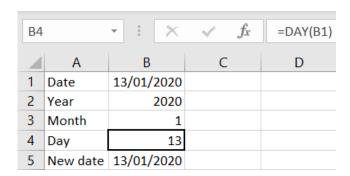
Not considering holidays

B3				f_x	=WORKDAY(B1;B2)
	A		B	C	D
1	Start		01/12/2020		
2	Nr. Days		23		
3	Difference		01/01/2021		

Considering holidays

B4				f_x	=WORKDAY(B1;B2;B3:D3)
	A		B	C	D
1	Start		01/12/2020		
2	Nr. Days		20		
3	Holidays December 2020		01/12/2020	08/12/2020	25/12/2020
4	Difference		31/12/2020		

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YEAR | MONTH | DAY | DATE

B2	fx	=YEAR(B1)

	A	B	C	D
1	Date	13/01/2020		
2	Year	2020		
3	Month	1		
4	Day	13		
5	New date	13/01/2020		

B3	fx	=MONTH(B1)

	A	B	C	D
1	Date	13/01/2020		
2	Year	2020		
3	Month	1		
4	Day	13		
5	New date	13/01/2020		

B4	fx	=DAY(B1)

	A	B	C	D
1	Date	13/01/2020		
2	Year	2020		
3	Month	1		
4	Day	13		
5	New date	13/01/2020		

B5	fx	=DATE(B2;B3;B4)

	A	B	C	D	E
1	Date	13/01/2020			
2	Year	2020			
3	Month	1			
4	Day	13			
5	New date	13/01/2020			

Difference between times

| B3 | | | ⋮ | ✕ | ✓ | *fx* | =B2-B1 |

◢	A	B	C	D
1	Start	0:00		
2	End	12:00		
3	Difference	0,5		

Format B3 as "General", or

else the result will be 12:00

| B2 | | | ⋮ | ✕ | ✓ | *fx* | =B1-"00:00" |

◢	A	B	C	D
1	End	12:00		
2	Difference	0,5		

Times need to be inserted inside

quotation marks

| B1 | | | ⋮ | ✕ | ✓ | *fx* | ="12:00"-"00:00" |

◢	A	B	C	D	E
1	Difference	0,5			

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NOW()

Function that returns the current* time

A1	▾ ⋮	✕ ✓ ƒx	=NOW()

◢	A	B	C	D
1	29/09/2021 17:15			

Difference between the current* time and midnight today

A1	▾ ⋮	✕ ✓ ƒx	=NOW()-"29/09/2021 00:00"

◢	A	B	C	D	E	F
1	0,719340046					

A1	▾ ⋮	✕ ✓ ƒx	=NOW()-TODAY()

◢	A	B	C	D	E
1	0,719675694				

* Slides made on 29/09/2021 at 17:15

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HOUR | MINUTE | SECOND | TIME

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Do conhecimento à prática.