



IN THE NAME OF ALLAH, MOST GRACIOUS,  
MOST MERCIFUL



COMPUTER APPLICATIONS  
**MS<sup>®</sup> EXCEL FOR ENGINEERS**



## LECTURE 5

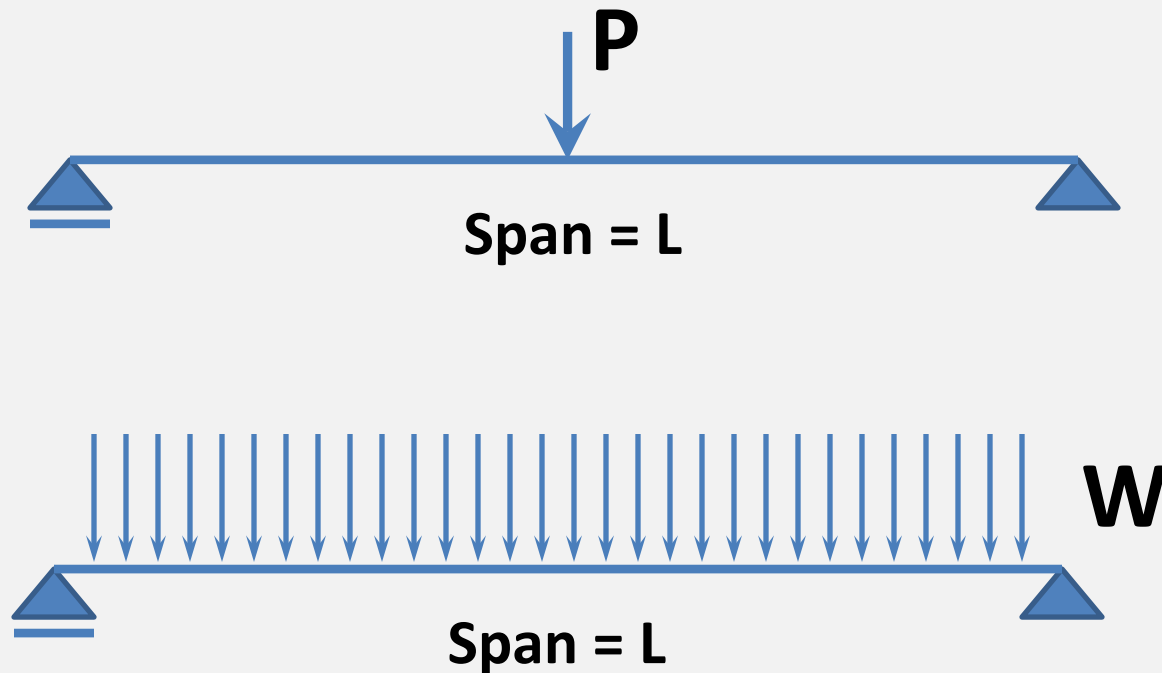
# WORKING WITH FUNCTIONS

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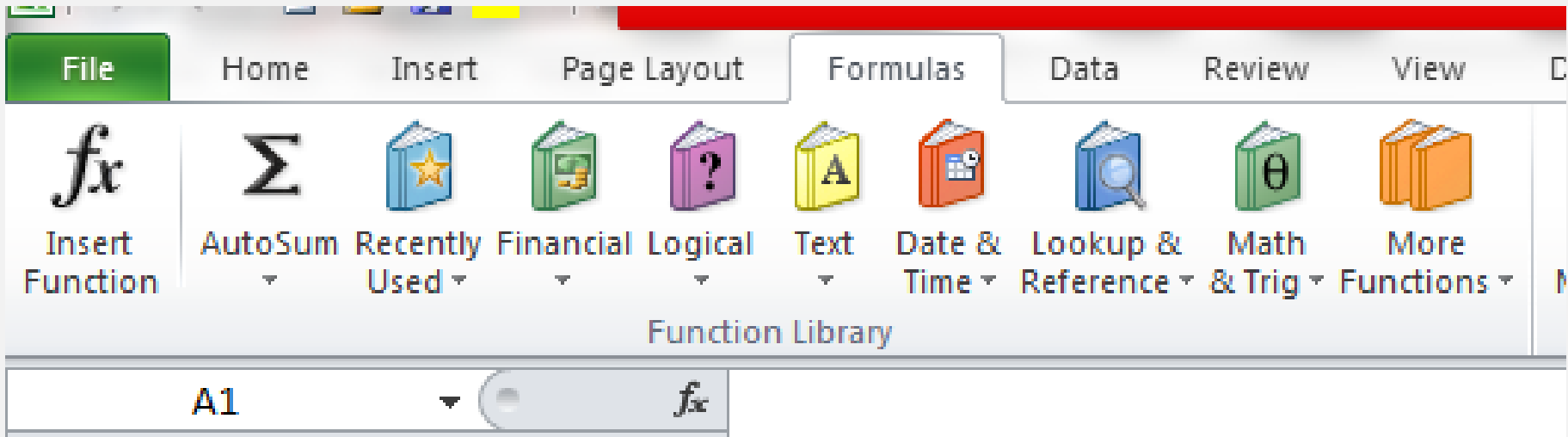
# TARGET APPLICATION

- We need to calculate reaction, max. bending moment, and deflection for the below simply supported beam



- **What are Functions?**

Functions are pre-made operations that use input to produce output

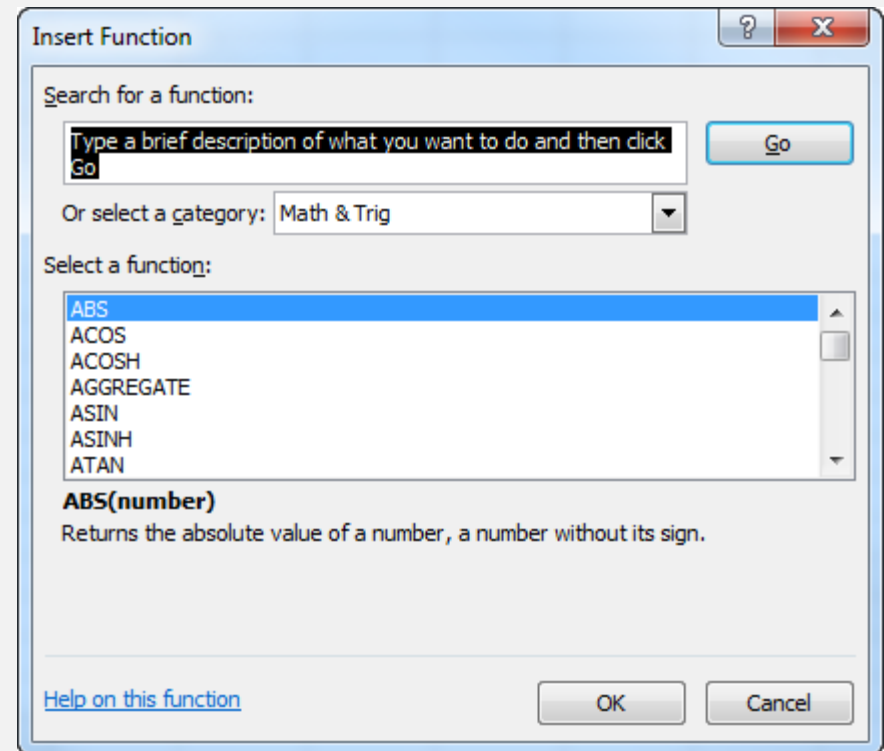
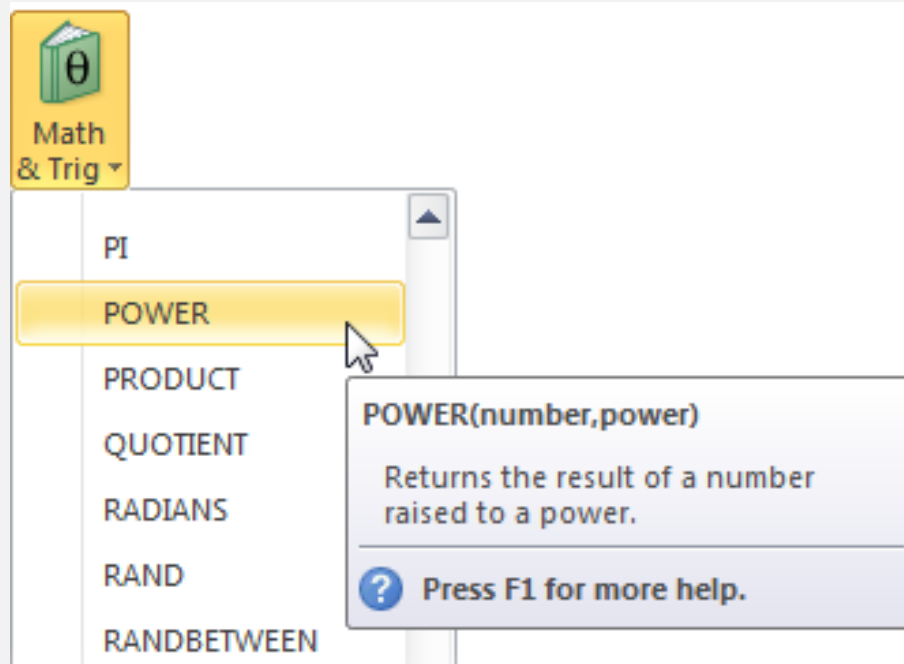




- **Many Functions Exists!**

- Databases
- Date and time
- Engineering
- Finance
- Worksheet metadata
- Worksheet metadata
- Logic
- Lookup and reference
- Math and trigonometry
- Statistical analysis
- Text strings
- External (miscellaneous)

- **Inserting Function**






- **Nested Functions**

**AVERAGE(AVERAGE(A2:A6), AVERAGE(B2:B6), AVERAGE(C2:C6))**



- Working with *Range Name*

		C2		fx =totalsales-totalexperiences	
	A	B	C		E
1	Sales	Expenses	Profit		
2	\$156,588.48	\$ 133,874.12	\$22,714.36		










- Working with *Range Name*

		C2		fx =totalsales-totalexperiences	
	A	B	C		E
1	Sales	Expenses	Profit		
2	\$156,588.48	\$ 133,874.12	\$22,714.36		





EXCEL FUNCTIONS REVIEW  
QUESTIONS





**LECTURES CAN BE FOUND AT:**

[HTTP://WWW.BU.EDU.EG/PORTAL/INDEX.PHP?ACT=135&PROF ID=2453&COURSE ID=6281](http://www.bu.edu.eg/portal/index.php?act=135&prof_id=2453&course_id=6281)





**THANKS FOR YOUR KIND  
ATTENTION**

