

**FAR  
BEYOND**

**MAT122**

Domain/Range - Introduction



Stony Brook University

# xy-plane

Plot ordered pairs on the **xy-plane**:

format:  $(x,y)$

$x$ -coordinate

$y$ -coordinate

$A (-3,5)$

$B (2,-4)$

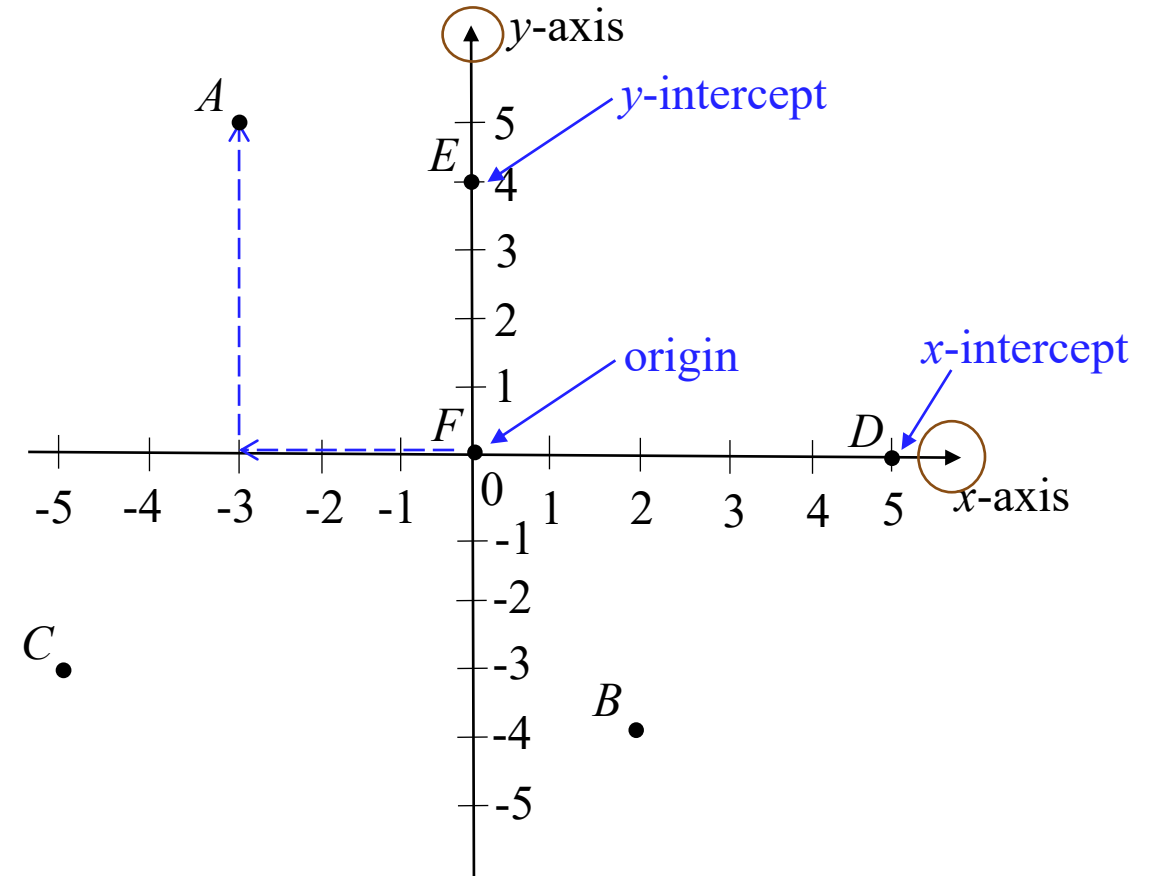
$C (-5,-3)$

$D (5,0)$

$E (0,4)$

$F (0,0)$

arrows indicate the positive direction



# Domain/Range

“is defined as”

**Domain** := all the  $x$ -values in a set

**Range** := all the  $y$ -values in a set

Below is a relation of ordered pairs:

$(x,y)$   
 $\{(A,1), (B,12), (C,5)\}$

domain:  $\{A, B, C\}$

range:  $\{1, 5, 12\}$

order smallest to largest

$\{(A,1), (B,8), (C,1), (A,5)\}$

domain:  $\{A, B, C\}$

range:  $\{1, 5, 8\}$

eliminate repeated values

# Domain and Range - Do

Do: State the domain and range of  $\{(0,9.1), (10,6.7), (30,10.8), (24,10.8)\}$

domain:

range: