

Cycle 4 – Advanced Components

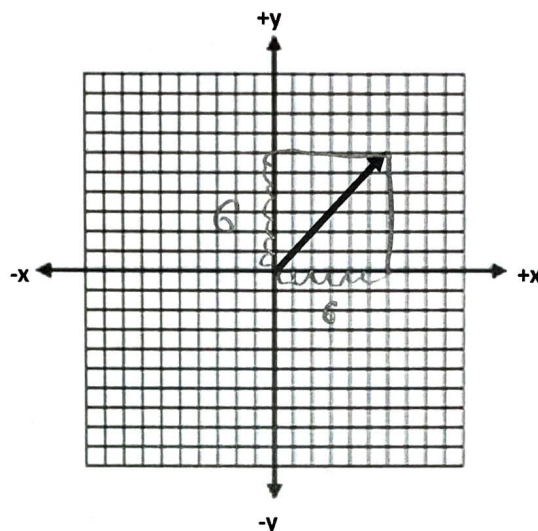
Check-in #1

Name: _____

Forces as components

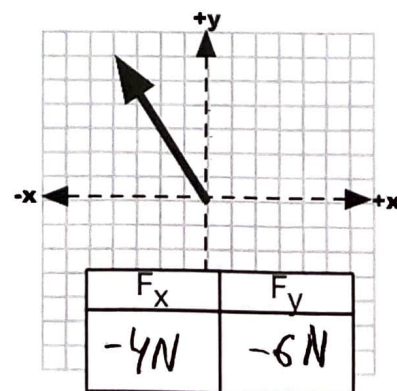
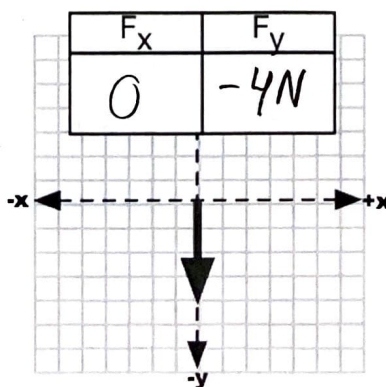
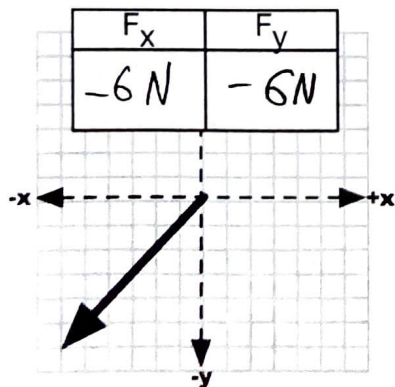
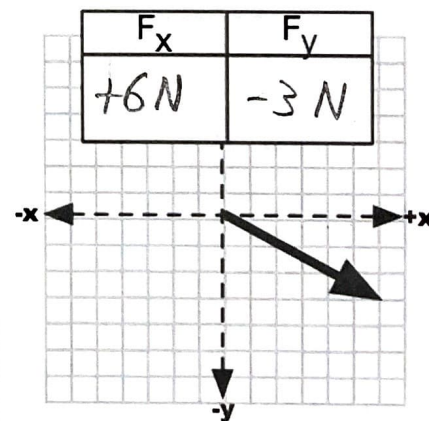
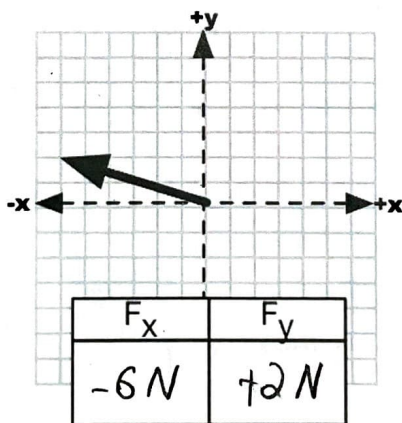
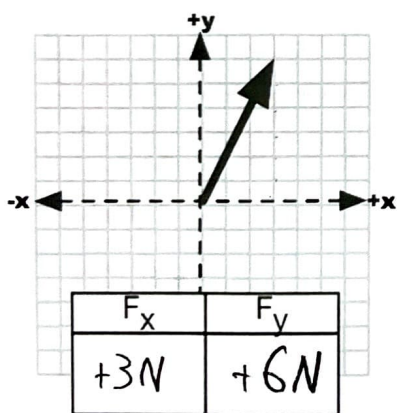
Let's say that we have a force pointing in the following direction. We can determine the force's x and y components by doing the following.

F_x	F_y
+6 N	+6 N



Count the spaces!

Sketch the x and y components. Estimate their size by counting the spaces. Include appropriate sign!



Use trig!

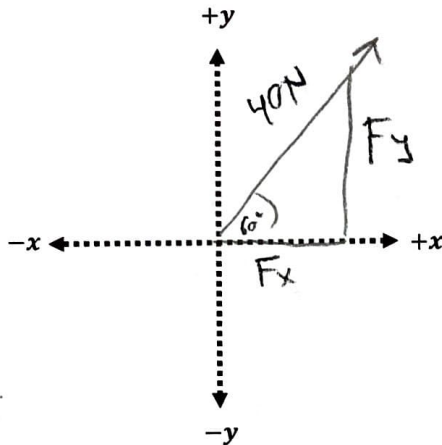
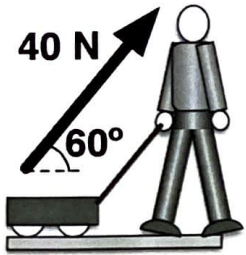
for "y" use "sin"

for "x" use "cos"

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Check-in #1

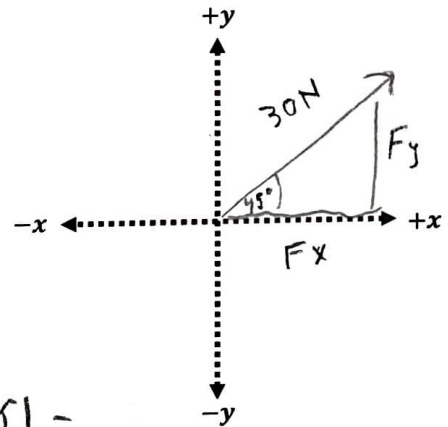
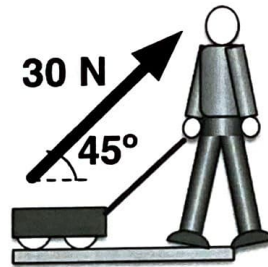
Sketch the x and y components. Calculate their size using Trig. Don't worry about F_G , F_N , or F_f yet!



$$F_x = 40 \cdot \cos(60) =$$

$$F_y = 40 \cdot \sin(60) =$$

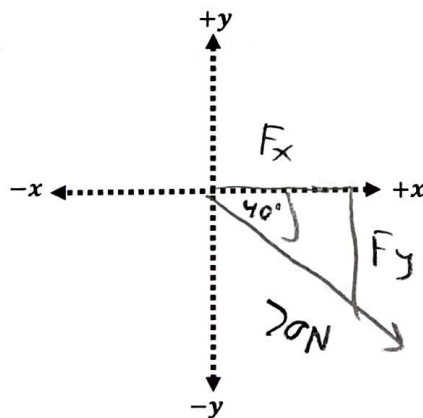
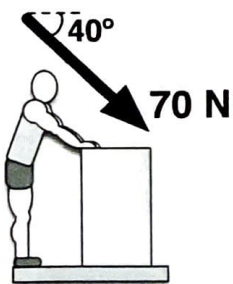
Both
Positive!



$$F_x = 30 \cdot \cos(45) =$$

$$F_y = 30 \cdot \sin(45) =$$

Both
Positive

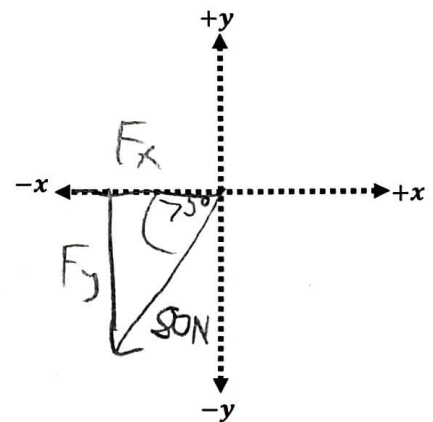
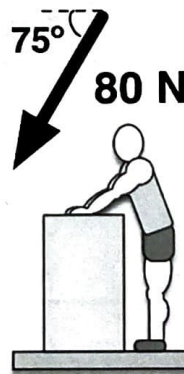


$$F_x = 70 \cdot \cos(40) =$$

$$F_y = 70 \cdot \sin(40) =$$

This
Positive!

This
negative!



$$F_x = 80 \cdot \cos(75) =$$

$$F_y = 80 \cdot \sin(75) =$$

Both
negative!