#### Scratch!

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#### What Kind of People Need to Tell the Computer Where to Put Things?





## **Programming from Left-to-Right**



## **Programming from Top-to-Bottom**





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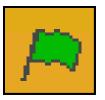
## When the Green Flag gets waved, what happens?



http://www.skirtsandscuffs.com/2011\_03\_01\_archive.html











## **Raise Your Left Hand**





#### **Raise Your Left Hand**

**Put Your Right Hand on Top of Your Head** 





**Raise Your Left Hand** 

**Put Your Right Hand on Top of Your Head** 

**Turn Around One Circle** 





#### **Raise Your Left Hand**

**Put Your Right Hand on Top of Your Head** 

**Turn Around One Circle** 

**Repeat 3 Times** 

**Meow Like a Cat** 

Count to 2





#### **Raise Your Left Hand**

## Put Your Right Hand on Top of Your Head

#### **Turn Around One Circle**

**Repeat 3 Times** 

**Meow Like a Cat** 

Count to 2

**Put Your Hands Down** 





#### **Raise Your Left Hand**

## Put Your Right Hand on Top of Your Head

#### **Turn Around One Circle**

**Repeat 3 Times** 

**Meow Like a Cat** 

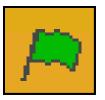
Count to 2

**Put Your Hands Down** 

Sit Down



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#### **Raise Your Left Hand**

## Put Your Right Hand on Top of Your Head

#### **Turn Around One Circle**

**Repeat 3 Times** 

**Meow Like a Cat** 

Count to 2

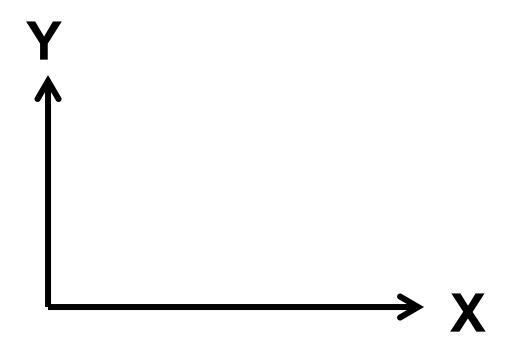
**Put Your Hands Down** 

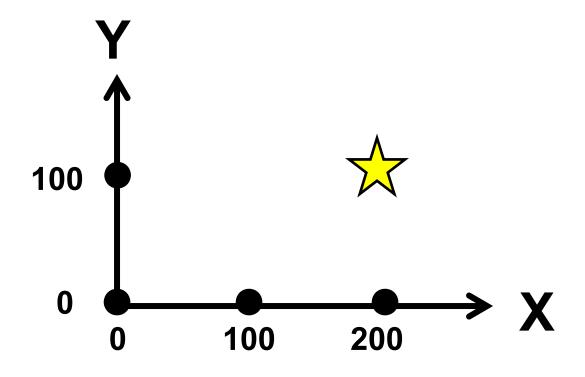
Sit Down



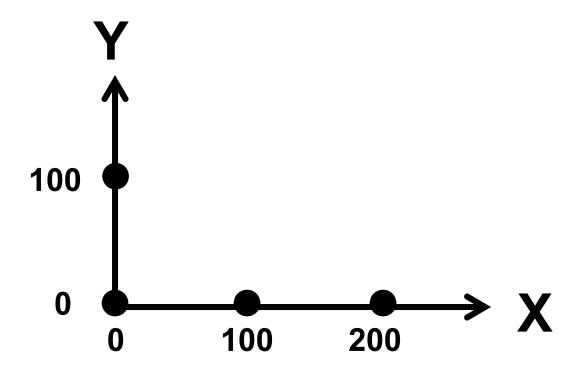
Oregon Stat Computer

Smile!



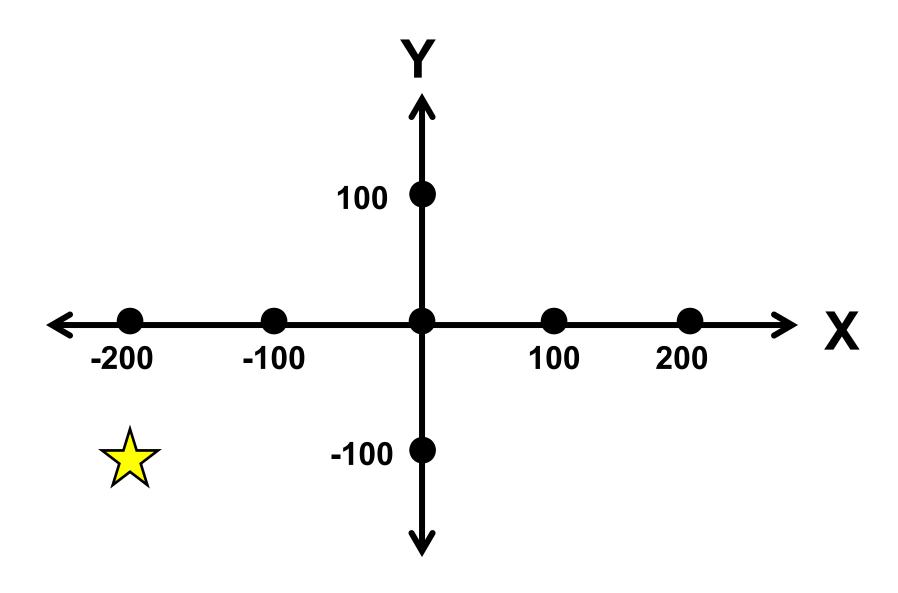




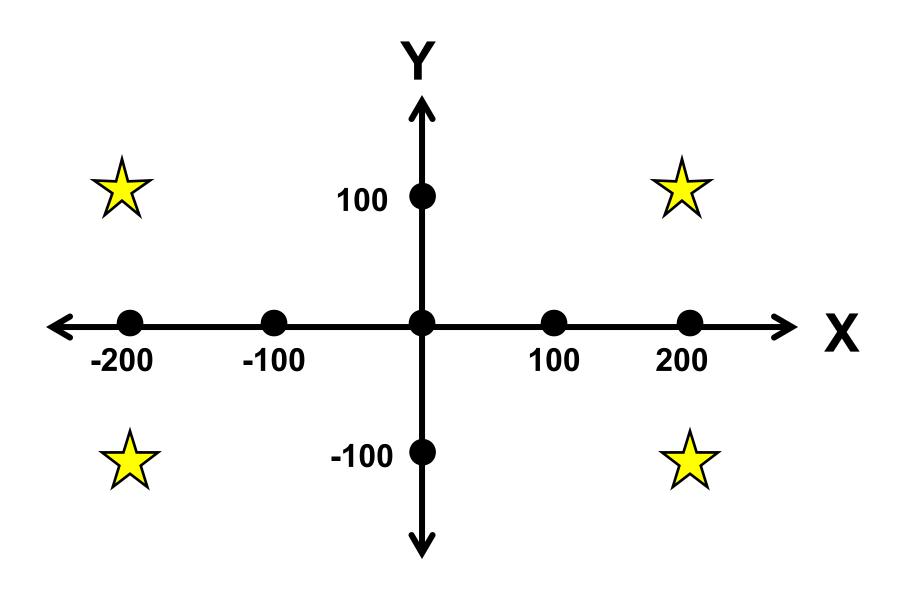














#### **Scratch Screen Layout** Commands **Sprite Manipulation** "Stage" (i.e., the scene) **Script Area** Command **Categories Run your Program! Sprite Selection** (the "waiting room") □ X Scratch 2 Offline Editor Edit▼ Tips Editor (beta) Scripts Costumes Events Control Sound Pen Data More Blocks 100 move 10 steps turn (15) degrees zurn 🔼 🚺 degrees -200 100 200 -100 point in direction 90▼ -100 point towards go to x: 0 y: 0 go to mouse-pointer ▼ glide 1 secs to x: 0 y: 0 New sprite: 💠 / 👛 💿 Sprites change x by 10 set x to 0 change y by 10 New backdrop: set y to 0 **∞** / **♣** o Q = Q **Computer Graphics**

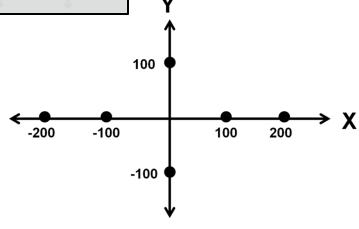
#### A Good Order to Start Doing Things In

- Green Flag puzzle piece
   Glide pieces
- 2. Additional actors 3 Glides for each
- 3. Glides in a forever loop
- 4. Turn (rotate) and Change size
- 5. Turn (rotate) and Change size in Forever loops
- 6. Multiple Green Flags
- 7. Background
- 8. Sound

glide 2 secs to x: 120 y: 100

#### **Move an Actor**

```
clicked
when
go to x: 0
glide
        secs to x:
                    120
                             100
        secs to x:
                   150
                            -100
glide
        secs to x:
```



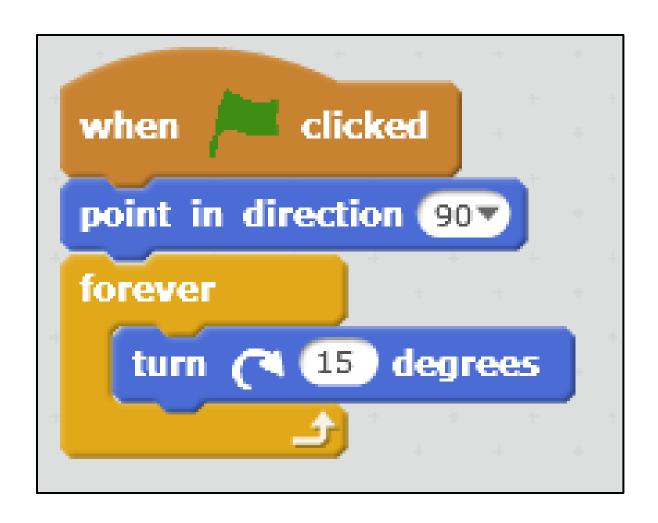


#### **Keep an Actor Moving**

```
clicked
when
go to x:
forever
           secs to x:
                        120
                                100
  glide
           secs to x:
  glide
            secs to x:
                        -150
```

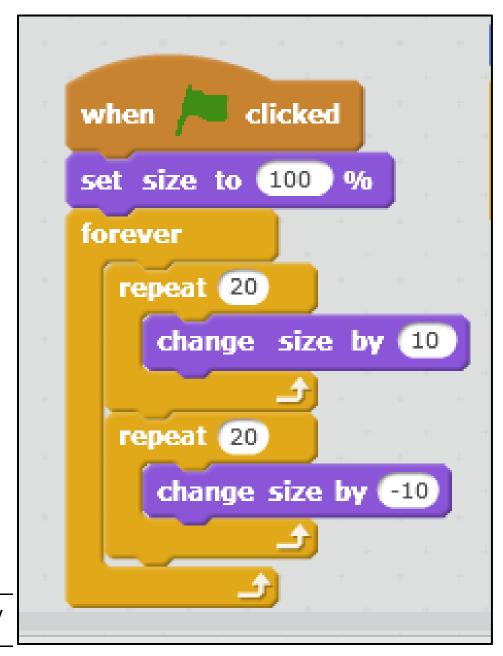


## **Keep an Actor Spinning**





#### **Keep an Actor Changing Size**





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# When the Green Flag gets waved, does only one car get to start, or all of them?



http://www.skirtsandscuffs.com/2011\_03\_01\_archive.html

## When the Green Flag gets waved, does only one program get to start, or all of them?

