

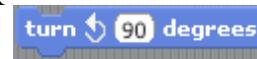
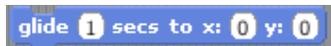
# SCRATCH CHALLENGES

Try complete the as many of the following challenges as you can in order. It is important that you take your time and really understand the basics.

## LEVEL 1:

**Challenge 1** - Glide Around the Screen - ([Video](#)):

Make the Cat glide around the edge of the screen using just the: glide block and turn block



**Challenge 2** - Move in a Rectangle - ([Video](#)):

Make the cat move in a rectangle using the following blocks:

Move –



Turn –



Repeat -



**Challenge 3** - Walking Cat - ([Video](#)):

Animation Station– Make the Cat “Walk” across the screen and say things.

**Challenge 4** - Hitting a Wall – ([Video](#))

Make the cat move across the screen and if it hits a wall say ouch and fall down.

Hint use the if block -



and



## LEVEL 2:

### Challenge 5 - Pattern Studio – ([Video](#))

Make the cat draw neat designs on the screen. Be creative and experiment with different blocks.

Hint: Here are some of the blocks you can use:

Pen down



Pen up



Clear



Extra Challenge: Can you make it so that you can control the cat with the arrow keys while it draws. You will need to use if statements.

### Challenge 6 - Collect the Coins Game – ([Video](#))

Make the cat move with arrow keys and collect the coins.

Part A: Make the Cat controlled with the arrow keys

Part B: Detect if the Coin is touching the cat and make it hide

Extra Challenge: See if you can keep track of how many coins the player has collected in a variable.

### Challenge 7 - Cat and Mouse Game – ([Video](#))

Make the cat controlled by the arrow keys chase a mouse around the screen and collect points for catching the mouse.

Part A: Make the Cat controlled by the arrow keys

Part B: Make a mouse move randomly around the screen

Part C: Make it so if the cat touches the mouse it eats it

### LEVEL 3:

### Challenge 8 - Maze Game – ([Video Example](#))

Make the ball navigate through the maze with different levels. Add lives to your game too.

Some Blocks you can use:

 located in looks in Stage



Extra Challenge: Add moving obstacles to your stage

### Challenge 9 - Pong – (Ask for an example)

Make the classic game of pong.

Part A: Make a ball bounce around the screen

Part B: Make a paddle move back and forth with the mouse or arrow keys

Part C: Make the ball bounce off the paddle

Hint:  makes the ball

change directions

Part D: If you miss the ball make sure a life is lost

### Challenge 10 - Bricks – (Ask for an example)

Make the game of bricks. Be Creative.

Hint: Have the bricks detect whether the ball hits it and broadcast message to the ball to bounce

Extra Challenge: Make different Levels

## LEVEL 4:

### Challenge 11 - Magic 8 Ball – ([Video](#))

Magic 8 ball: Make an all knowing cat or magic 8 ball so that when you click it gives you a random answer.

Hint: Use a list to store the options

### Challenge 12 - Drawing Program – (Ask for an Example)

Make your very own drawing program. Have a pen which you can draw with the mouse and change colors. Create buttons to control your drawing program.

Here are some blocks that can help you:



### Challenge 13 - Bowling – (Ask for an Example)

Make a player bowl a ball and knock over pins. Use the arrow keys to aim the ball and space to fire. Keep score.

Here are some blocks that can help you:



## LEVEL 5:

### Challenge 14 - Scrolling Background – (Ask for an Example)

Make a game with a scrolling background (Like Super Mario Brothers)

Use the Scrolling Background Demo in examples to begin.

### Challenge 15 - Make your own game or animation – (Ask for an Example)

Create your own Scratch game or animation. Be creative and use all the skills you used in previous challenges. You can ask for some ideas.