


```
9 ##### P1
10 # A method is just a function attached to an object.
11 # In other words a property is a type of variable like a method is a type of function.
12
13 cat = {}
14 cat.meow = ->
15     print("mewwww!")
16 cat.meow() # Methods are called just like functions, because they are functions. ... "mewwww!" ...
17
18 meow() # ERROR. There is no meow function out in the open, only on the cat object. meow by itself refers to nothing!
19
20
```

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21 ##### P2
22 # Methods can have parameters that accept arguments, just like normal functions.
23
24 cat = {}
25 cat.eat = (food) ->
26     print("I pooped " + food) # (For a refresh on how + behaves with strings see 01a-variables.pdf, P6)
27
28 cat.eat("kibbles") # "I pooped kibbles"
29
30
```

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31 ##### P3
32 # Methods are special in one way though, they can refer to the object they belong to using the keyword 'this'.
33 # In a method 'this' refers to the object the method is attached to.
34
35
36 player = {health:100,name:"Bob"}
37 player.explode = ->
38     this.health = 0
39     print(this.name + " is dead!")
40
41 print(player.health) # 100
42 player.explode()    # "Bob is dead!"
43 print(player.health) # 0
44
45
```

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46 ##### P4
47 # Another example.
48
49 cat = {name:"Mittens"}
50 cat.meow = -> {
51   print(this.name + " wants pets")}
52
53 cat.meow() -- # "Mittens wants pets"
54 cat.name = "Biff" -- # Change the value of the name property
55 cat.meow() -- # "Biff wants pets"--
56
57
```

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58 ##### P5
59 # For comparison, note how the function below accesses and modifies a variable out in the open.
60
61 points = 0
62
63 catchSnitch = ->
64     points = points + 150
65
66 print(points) # 0
67 catchSnitch()
68 print(points) # 150
69
70
71
```

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72 ##### P6
73 # Here's an example using a Layer.
74
75 box = new Layer()
76 box.scoot = -> this.x = this.x + 20
77 box.onMouseDown(box.scoot) # Click the box to scoot it 20pt to the right from wherever it is.
78
79
80
```

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81 #####
82 ##### Shorthand [ optional ]
83 #####
84
85 ##### P7
86 # In CoffeeScript we can substitute the @ symbol for 'this.'
87 # Note that @ takes the place of this AND the dot afterwards.
88
89 box = new Layer()
90 box.scoot = -> @x += 20 # For a refresher on '+= ' see 01a-variables, P13
91 box.onMouseDown(box.scoot)
92
93
```



```
94 ##### P8
95 # You can define a method when using CoffeeScript's Object Literal shorthand.
96 # You can call a method using CoffeeScript's function call shorthand.
97
98 cat = {} # new variable cat set equal to...
99   name: "mittens" # ...a new object, beginning with its first property:value pair
100   age: 10 # another property:value pair
101   eat: (food) -> {} # method declaration
102     print "I pooped " + food # method body
103
104 print cat.name # If we call a method with an argument, we can omit the parenthesis just like with normal functions.
105 print cat.age
106 cat.eat "kibbles"
107
108
109 #####
110 ##### End
111 #####
```