

```
nums = Series([7,8,9], index=[-1,0,1])
x = Series({"A":1, "B":2, "C":3})
y = Series({"A":2, "C":12, "D":4})
```

①

Expression

Result(s)

nums[0]	
nums.at[0], nums.iat[0]	
nums.loc[-1], nums.iloc[-1]	
x / y	

```
s = Series(["A", "B", "C", "D"])
letters = Series(["x", "y", "z"], index=[1, 0, 3])
```

②

Expression	Result(s)
s[-1]	
s[-2:]	
s + s	
letters[0]	
s + letters	
s[1:] + s[:-1]	

```
v = Series([-1, 1, 200, 191, 4])
```

3

Expression	Result(s)
<code>v < 0</code>	
<code>v * v == 1</code>	
<code>v[v > 100]</code>	
<code>v[v % 2 == 0]</code>	
<code>v[(v>0) & (v<100)]</code>	

Code:	storms.csv:
<pre>path = "storms.csv" tab = pd.read_csv(path) df = DataFrame({ "code": ["o", "p", "a"], "where": ["other", "Pacific", "Atlantic"] })</pre>	<pre>name,year,type,speed,place alice,2016,tornado,100,o bob,2016,hurricane,200,p cindy,2017,tornado,150,o dan,2018,tornado,300,o eve,2018,hurricane,250,a</pre>

4

Expression	Result(s)
<code>df["code"]</code>	
<code>df.code</code>	
<code>type(df.code), type(df.where)</code>	
<code>tab.year.mean()</code>	
<code>tab.year == 2018</code>	
<code>tab.name[tab.year == 2018]</code>	
<code>df["where"] == "Atlantic"</code>	
<pre>b = df["where"] == "other" code = df.code[b].item() nms = tab.name[tab.place==code]</pre>	# what are b, code, nms?

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5

Expression

Result(s)

<code>tab.loc[0]</code>	
<code>tab.at[4, "type"]</code>	
<pre>df.at[0, "where"] = "mainland" place = df["where"][0]</pre>	# what is place?
<pre>tab.loc[:, "speed"] += 1 col = tab.speed</pre>	# what is col?