Question #1: ¶

What is the data type of the column "peak-rpm"?

[10]:
```
# Write your code below and press Shift+Enter to execute

df['peak-rpm'].dtypes
```

[10]:
```
dtype('float64')
```

Question #2:

Find the correlation between the following columns: bore, stroke, compression-ratio, and horsepower.

Hint: if you would like to select those columns, use the following syntax: df[['bore','stroke','compression-ratio','horsepower']]

[12]:
```
# Write your code below and press Shift+Enter to execute

df[['bore', 'stroke', 'compression-ratio', 'horsepower']].corr()
```

[12]:

	bore	stroke	compression-ratio	horsepower
bore	1.000000	-0.055390	0.001263	0.566936
stroke	-0.055390	1.000000	0.187923	0.098462
compression-ratio	0.001263	0.187923	1.000000	-0.214514
horsepower	0.566936	0.098462	-0.214514	1.000000

Question 3 a):

Find the correlation between x="stroke" and y="price".

Hint: if you would like to select those columns, use the following syntax: df[["stroke","price"]].

[19]:
```
# Write your code below and press Shift+Enter to execute

df[["stroke","price"]].corr()
```

[19]:

	stroke	price
stroke	1.00000	0.08231
price	0.08231	1.00000

Question 3 b):

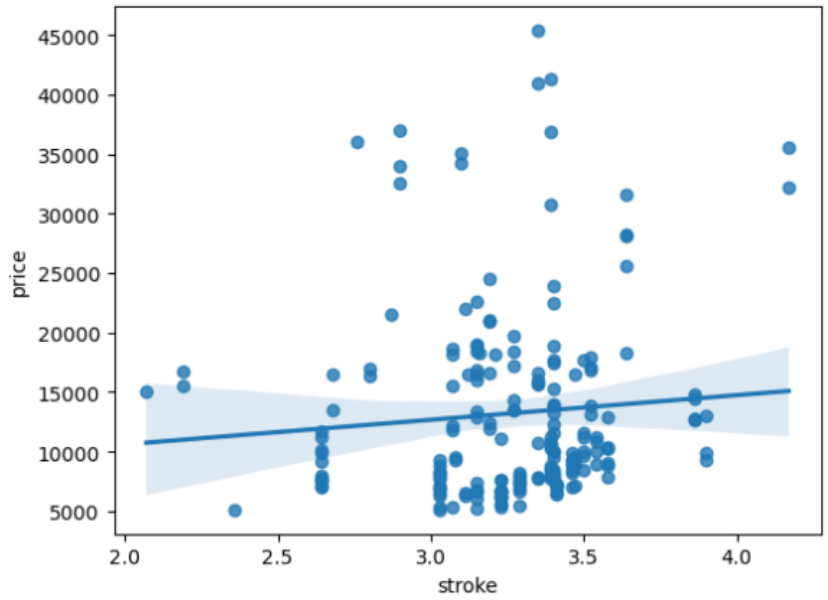
Given the correlation results between "price" and "stroke", do you expect a linear relationship?

Verify your results using the function "regplot()".

[20]:
```
# Write your code below and press Shift+Enter to execute

sns.regplot(x="stroke", y="price", data=df)
```

[20]:
```
<AxesSubplot:xlabel='stroke', ylabel='price'>
```



Question 4:

Use the "groupby" function to find the average "price" of each car based on "body-style".

[39]:
```
# Write your code below and press Shift+Enter to execute
# grouping results

df_grupo_test = df[['body-style','price']]
grouped_test_bodystyle = df_grupo_test.groupby(['body-style'],as_index= False).mean()
grouped_test_bodystyle
```

[39]:

	body-style	price
0	convertible	21890.500000
1	hardtop	22208.500000
2	hatchback	9957.441176
3	sedan	14459.755319
4	wagon	12371.960000