Death Penalty and Homicide Rates   **Workshop**
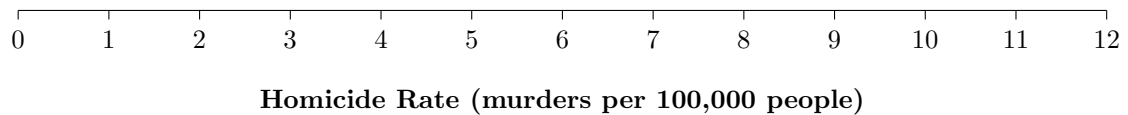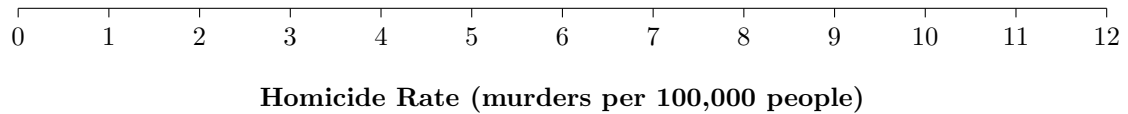
Does the death penalty help reduce homicide rates? The table below contains the homicide rate (murders per 100,000 people) for each state in 2014.

States with death penalty		States without death penalty	
State	Homicide Rate	State	Homicide Rate
1. New Hampshire	0.9	1. Maine	1.6
2. Idaho	2	2. Minnesota	1.6
3. Oregon	2	3. Vermont	1.6
4. South Dakota	2.3	4. Hawaii	1.8
5. Utah	2.3	5. Iowa	1.9
6. Washington	2.5	6. Massachusetts	2
7. Wyoming	2.7	7. Connecticut	2.4
8. Colorado	2.8	8. Rhode Island	2.4
9. Nebraska	2.9	9. Wisconsin	2.9
10. Kansas	3.1	10. North Dakota	3
11. Kentucky	3.6	11. New York	3.1
12. Montana	3.6	12. New Jersey	3.9
13. Ohio	4	13. West Virginia	4
14. Virginia	4.1	14. New Mexico	4.8
15. California	4.4	15. Illinois	5.3
16. Texas	4.4	16. Michigan	5.4
17. Oklahoma	4.5	17. Alaska	5.6
18. Arizona	4.7	18. Maryland	6.1
19. Pennsylvania	4.8		
20. Indiana	5		
21. North Carolina	5.1		
22. Arkansas	5.6		
23. Alabama	5.7		
24. Georgia	5.7		
25. Tennessee	5.7		
26. Delaware	5.8		
27. Florida	5.8		
28. Nevada	6		
29. South Carolina	6.4		
30. Missouri	6.6		
31. Mississippi	8.6		
32. Louisiana	10.3		

1. Find the 5-number summary of homicide rates for the states with the death penalty.

2. Find the 5-number summary of homicide rates for the states without the death penalty.

3. Make side-by-side boxplots to compare these two sets of data.

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  0   1   2   3   4   5   6   7   8   9   10  11  12
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Homicide Rate (murders per 100,000 people)

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  0   1   2   3   4   5   6   7   8   9   10  11  12
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Homicide Rate (murders per 100,000 people)

4. Find the IQR for each boxplot above.

5. Using the $1.5 \times$ IQR rule, are any of these states outliers? If so, which ones?

6. Why are homicide rates called a rate? What does the word **rate** mean in this context?

7. Why bother with homicide rates? Why not compare the total number of murders in each state?