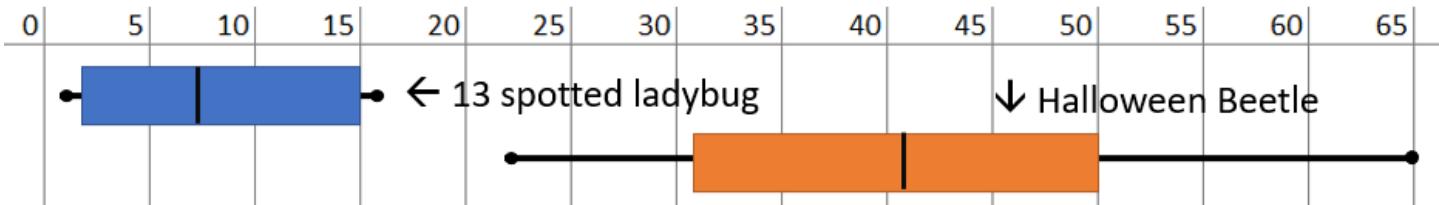


# One Variable Data Management

2.2 

Name: .....

1. ● Look at this box and whisker graph. It is about the number of ladybugs found in a large garden over a series of days. The data that was used to make the graph is found below it. Answer the questions.



Position	1 - min	2	3	4	5 - Q1	6	7	8	9 - med	10	11	12	13 - Q3	14	15	16	17 - max
13 spot	1	1	2	2	2	2	3	6	7	12	14	15	15	15	16	16	16
Halloween	23	25	27	29	31	35	36	38	41	46	49	49	50	55	57	60	65

The 13-spotted Ladybug is native to Ontario. They winter outside.



The Halloween Ladybug is not native to Ontario. They winter inside.



(a) What is the minimum number of 13-spotted ladybugs found?  
 (b) What is the Q3 value of the Halloween beetle?  
 (c) What is the IQR for the 13-spotted ladybug?  
 (d) What is the IQR for the Halloween beetle?  
 (e) What is the median count of the Halloween beetle?

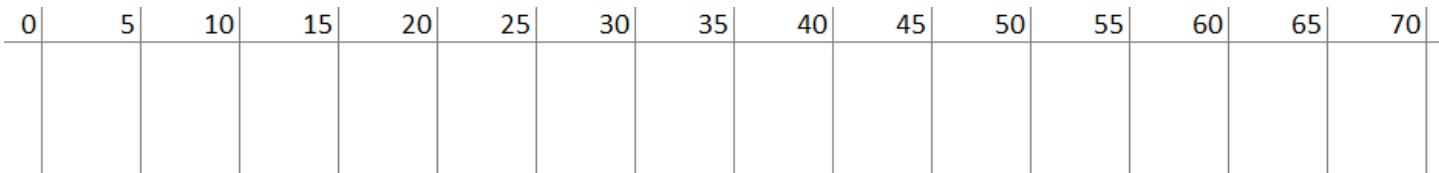
(f) Will the homeowner have a problem with ladybugs in their house in the fall? Explain.

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 .....

2. ✓ Make a box and whisker graph for this data about the sizes of trout caught in lake Opeongo on August 23, 2022 in Algonquin Park.

Position	1 - min	2	3	4	5 - Q1	6	7	8	9 - med	10	11	12	13 - Q3	14	15	16	17 - max
Fish size (cm)	25	27	29	33	37	38	39	42	44	46	48	49	50	53	56	58	60

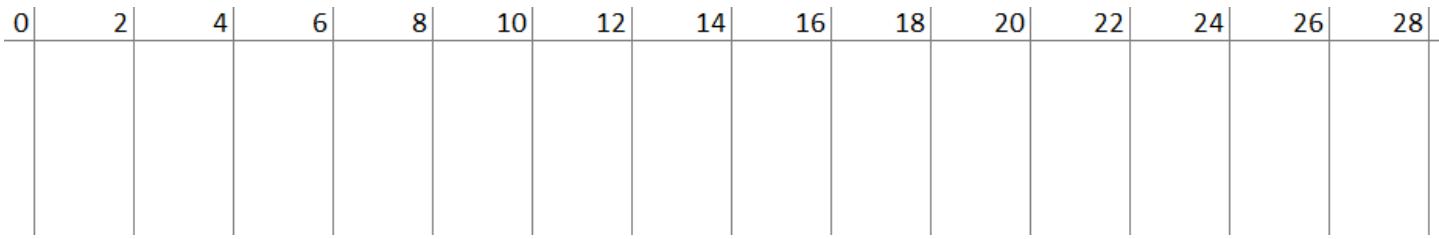
(a) Use the number line to draw your Box and Whisker chart:



(b) What is the IQR for the fish sizes on Lake Opeongo? .....

(c) Canoe Lake's IQR is 35-43. Which lake has healthier fish? .....

3. ☺ Make a box and whisker graph for this data. It is about some insect samples collected over a period of days on Canisbay Lake. Then, fill in the calculations below.



Position	1 - min	2	3	4 - Q1	5	6	7 - med	8	9	10 - Q3	11	12	13 - max
Stonefly Larvae	0	1	1	2	2	3	3	3	4	4	4	5	5
Midge Larvae	9	10	11	12	14	15	17	19	20	22	22	25	26

**(a) Stonefly Larvae Calculations:**

Min	
Q1	
Median	
Q3	
Max	
IQR	

Stoneflies cannot live in warm or polluted water.

**(b) Midge Larvae Calculations:**

Min	
Q1	
Median	
Q3	
Max	
IQR	

Midge Larvae can live in oxygen poor or polluted water.

**(c) What conclusions can you draw about the lake where these bugs were collected?**

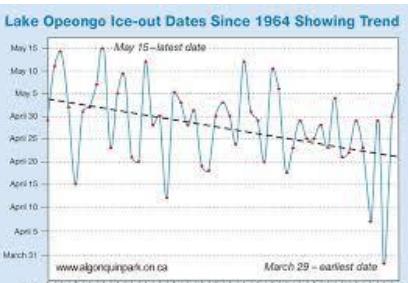
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4. ☺ Make the indicated calculations for each data set.

Position	1	2	3	4	5	6	7	8	9
Year	1968	1964	1969	1970	1967	1971	1965	1966	1972
Ice Off Date	14-Apr	27-Apr	30-Apr	1-May	1-May	6-May	10-May	14-May	15-May
Days Aft Jan 1	103	116	119	120	120	125	129	133	134

Position	1	2	3	4	5	6	7	8	9
Year	2021	2017	2013	2020	2015	2016	2014	2018	2019
Ice Off Date	10-Apr	25-Apr	30-Apr	30-Apr	1-May	1-May	7-May	10-May	10-May
Days Aft Jan 1	99	114	119	119	120	120	126	129	129



**(a) 1964-1972 (Days Aft Jan 1):**

Min	
Q1	
Median	
Q3	
Max	
IQR	
Average	

**(b) 2012-2020 (Days Aft Jan 1):**

Min	
Q1	
Median	
Q3	
Max	
IQR	
Average	

**(c) What conclusions can you draw from the changes in ice out dates?**

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