

Identify an outlier and decide how to treat it

NAME	DATE	SCORE / 10
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1 Students in Grade 7 were asked how many hours they sleep each night: 10, 9, 9, 9, 10, 8, 8, 5. The answer of 5 came from a parent, not a student. What should be done with the value 5?

- ☐ Keep it, since every answer in a survey counts
 ☐ Leave it out, since it is not from a Grade 7 student
 ☐ Change it so that it is close to the rest
 ☐ Keep it, since it is not far from the rest

2 These numbers are in order: 25, 27, 31, 34, 36, 37, 41, 62. Using the $1.5 \times \text{IQR}$ test, is 62 an outlier?

- ☐ Yes
 ☐ No

3 These numbers are in order: 17, 19, 22, 26, 28, 30, 32, 34, 34, 38, 39, 56. Using the $1.5 \times \text{IQR}$ test, which value is an outlier?

- ☐ There is no outlier
 ☐ 17
 ☐ 39
 ☐ 56

4 These numbers are in order: 23, 34, 34, 36, 36, 36, 40, 43, 43, 47, 48, 48. Using the $1.5 \times \text{IQR}$ test, is 23 an outlier?

- ☐ Yes
 ☐ No

5 The list shows each runner's time in a fun run, in minutes: 9, 8, 18, 9, 7, 10, 10, 9. The runner who took 18 minutes fell and then finished the run. What should be done with the value 18?

- ☐ Remove it, since it is far from the rest
 ☐ Keep it, since it is a real result from the run
 ☐ Change it so that it is close to the rest
 ☐ Remove it, since it makes the mean larger

6

These numbers are in order: 26, 26, 30, 32, 36, 37, 41, 53. Using the $1.5 \times \text{IQR}$ test, which value is an outlier?

- ☐ There is no outlier ☐ 53 ☐ 41 ☐ 26
-

7

The list shows each student's height, in cm: 162, 145, 156, 15, 149, 160, 161, 147. What should be done with the value 15?

- ☐ Keep it as it is, since every value must be used
☐ Check it first, since it is likely a mistake in the record
☐ Remove it, since it is the smallest value ☐ Replace it with the mean of the other values
-

8

These numbers are in order: 16, 17, 18, 20, 22, 22, 24, 26, 27, 29, 32, 44. Using the $1.5 \times \text{IQR}$ test, which value is an outlier?

- ☐ 32 ☐ 16 ☐ There is no outlier ☐ 44
-

9

These numbers are in order: 21, 38, 42, 42, 46, 49, 53, 53. Using the $1.5 \times \text{IQR}$ test, which value is an outlier?

- ☐ 21 ☐ 53 ☐ 38 ☐ There is no outlier
-

10

These numbers are in order: 13, 34, 36, 39, 43, 43, 47, 50. Using the $1.5 \times \text{IQR}$ test, which value is an outlier?

- ☐ 50 ☐ 34 ☐ 13 ☐ There is no outlier

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1 Leave it out, since it is not from a Grade 7 student

3 56

5 Keep it, since it is a real result from the run

7 Check it first, since it is likely a mistake in the record

9 21

2 Yes

4 No

6 There is no outlier

8 44

10 13