

But What Do You Mean?

Student Worksheet

Name _____

Class _____

In this activity, you will explore:

- The mean
- The weighted mean

Open the document *PTE-ProbStat-WhatDoYouMean_EN.tns* on your TI-Nspire™ math and science learning handheld, and follow along with your teacher to work through the activity (Figure 1). Use this document as a reference and to record your answers.

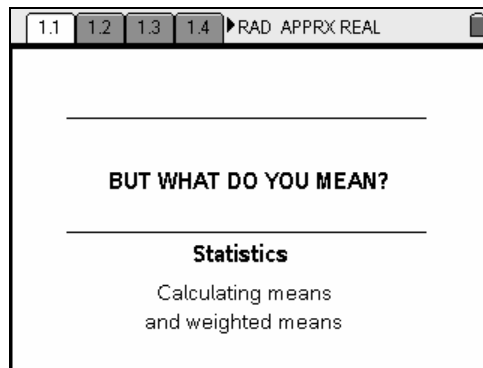


Figure 1

Problem 1 – The Mean of a Few Numbers

Consider this set of numbers: 5, 14, 18, 32, 16.

1. Find the average by dividing the sum of all of the numbers by the total number of numbers on page 1.3. _____
2. On page 1.5, find the mean using the mean command. _____
 - The set of numbers should be enclosed in braces, which is enclosed in parentheses.
3. Use a formula in the spreadsheet on page 1.7. _____
 - Remember that all formulas must begin with an equal sign.

4. Play the mean game on page 1.9.
5. In your own words, can you give a clear description of what the mean of a set of numbers is (and not just how to find it)?

6. On page 1.12, find the mean of 7, 8, 2.2, 3, 1.9, and 12.
 - Use each of three tools provided.
7. What is the mean of this set of numbers? _____

Problem 2 – The Mean of Many Numbers

8. Read through and discuss pages 2.1 and 2.2 with your teacher.
9. Think about how you might go about finding the mean of the test scores below:
2 got a 20, 5 got a 19, 4 got an 18, 4 got a 17, 2 got a 16, 2 got a 14, 1 got a 12
10. On page 2.3, list the frequencies, and follow your teacher's directions for finding the mean.
11. What is the mean? _____
12. Use the mean command on page 2.4 to find the mean of the set of numbers.
 - The scores should be listed as the first set, in braces, and the frequencies should be listed as the second set, in another set of braces.
 - Both sets are enclosed in parentheses.
13. What is the mean? _____
14. On page 2.6, find the mean for the scores below. Use both ways discussed.
11 students got a 5, 8 students got a 4, and 10 students got a 3
15. What is the mean? _____

Problem 3 – The Weighted Mean

16. Read through and discuss pages 3.1 and 3.2 with your teacher.

17. Use both of the applications on page 3.3 to find the mean.

Quizzes worth 10% each and test worth 50%

Quizzes: 56, 72, 85, 78, and 67; Test: 92

18. What is the mean? _____

19. On page 3.6, find the mean for the scores below. Use both ways discussed.

First three tests worth 15% each and last test worth 55%

First three tests: 95, 90, and 98; Last test: 60

20. What is the mean? _____

21. *Think About It:* When will a weighted mean be higher than the regular mean?

22. When will it be lower? Explain.

Extension

23. Read the information on pages 4.1 through 4.3.
24. Use the definitions to find each type of mean for the following data set.

3, 6, 9, 4, 4, and 5

Harmonic mean: _____ Quadratic mean: _____

25. Can you find other examples of means and where they occur?