Your homework from Day 15 of this course included a discussion of some of the uses of parenthesis. You should review this list before proceeding.

Another use of parenthesis is to separate expressions. For example, suppose that in your tiling business, you have the two designs shown below in your catalog:

 

**Greenland Border** **Green Eye Border**

Basic unit: 2T + Rb Basic unit: 4Rb + 2T

You have a customer who wants to combine the two into one design as shown below:



**Custom Design**

Because all of your accounting spreadsheets are set up with your existing designs, it might be helpful for you to write the expression for the Custom Design in terms of the other two designs: 2 (2T + Rb) + (4Rb + 2T)

The parenthesis serve two different purposes here. The first set shows multiplication indicating you can use the Distributive Property:

2 (2T + Rb) + (4Rb + 2T) 🡪 (4T + 2 Rb) + (4Rb + 2T)

But the parenthesis also help you remember that the two polynomials have a meaning in your accounting system. This is only meaning *within a context*. It doesn’t mean anything mathematically. If we remove the parenthesis, we still have an equivalent expression. In fact, it can be simplified.

(4T + 2 Rb) + (4Rb + 2T) 🡪 4T + 2 Rb + 4Rb + 2T 🡪 6T + 6Rb

When you see parenthesis grouping an expression together, you should look at it carefully to determine if the parenthesis indicate either order of operations or multiplication. If not, they may simply indicate a contextual grouping and can be removed to allow you to simplify the expression.

**For each expression below, select the item from the list below that best describes the purpose of the parenthesis in the expression. Write the letter of the item in the blank.**

1. Indicates multiplication
2. Indicates order of operations
3. Separates symbols
4. Groups expressions
5. \_\_\_\_\_ $\left(2a^{3}-3a+5\right)+ \left(4a^{3}+ 9\right)$
6. \_\_\_\_\_ $\left(x^{2}+ 3x-1\right)-4(2x+5)$
7. \_\_\_\_\_ $5\left(3\right)+2\left(9\right)$
8. \_\_\_\_\_ $(4-8)^{2}+ 3$
9. \_\_\_\_\_ $6+(-5)$

**Learning Skill Reflection**

Write your responses to these questions on your own paper or type them.

1. Review your first three quizzes and your exam. Are there any concepts that you have missed more than once? Are there any types of errors you have made repeatedly? What concepts do you need to work on to understand better?
2. What do you think your current grade is in the course? How does this compare with the goal you set in your Math Autobiography?
3. There have been four readings on learning skills in this course. Write a brief summary of what you think is the most important and most useful information from these readings.

|  |  |
| --- | --- |
| * Brain-Based Reading I
* Brain-Based Reading II
 | * Studying and Learning Math
* Self-Assessment
 |

**Thinking Ahead about Polynomials**

For your next class, you will be expected to understand the vocabulary and concepts used in the questions listed below from your textbook. To learn this material, read pp. 385-389 of your text. Most of the answers to the questions are in your book. Those that aren’t will be posted on your instructor’s website. If you need help with this material, see your instructor or visit the Algebra Alcove.

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