4.1 | 4.2 | 4.3

4.1 Order of Operations

The Order of Operations applies to calculations involving positive and negative numbers. The following questions provide practice in using the Order of Operations.

In a game called Dealing Up, a player draws four cards. The player uses all four cards to write a number sentence that gives the greatest possible result.

> **?** What is the greatest result you can make from two of the following numbers? Three? Four?
>
> -25 $+2$ -3 $+3$

Problem 4.1

A Jamar and Elena are playing Dealing Up. Jamar draws the following four cards:

1. Jamar writes $5 - (-6) \cdot 4 + (-3) = 41$. Elena says the result should be 26. Who is correct and why?

2. Elena starts by writing $-3 - (-6) + 5^4$. What is her result?

3. Insert parentheses into $-3 - (-6) + 5^4$ to give a greater result than in part (2).

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4/7/2015   media.pearsoncmg.com/curriculum/dash/courses/CMP3_TP_G7_20150309/course_base/resources/content_module_785/assets/87F1E0F4819F26BDEC…

4.1   4.2   4.3

Problem 4.1 continued

B Find each value.

   1. $-7 \cdot 4 + 8 \div 2$

   2. $(3 + 2)^2 \cdot 6 - 1$

   3. $2\frac{2}{5} \cdot 4\frac{1}{2} - 5^3 + 3$

   4. $8 \cdot (4 - 5)^3 + 3$

   5. $-8 \cdot [4 - (-5 + 3)]$

   6. $-16 \div 8 \cdot 2^3 + (-7)$

C Use parentheses, where needed, to make the greatest and least possible values.

   1. $7 - 2 + 3^2$

   2. $46 + 2.8 \cdot 7 - 2$

   3. $25 \cdot (-3.12) + 21.3 \div 3$

   4. $5.67 + 35.4 - 178 - 181$

D Rodrigo performs the following computation:

$$3 + 2 \cdot 7 - 6$$

His answer is 29.

   1. Explain how Rodrigo obtained his answer.

   2. Is Rodrigo's answer correct? If not, what is the correct answer? Explain.

E Use the Order of Operations to find the value. Show your work.

$$3 + 4 \cdot 5 \div 2 \cdot 3 - 7^2 + 6 \div 3 = \blacksquare$$

A C E Homework starts on page 86.