LESSON MAKER PRO

Grouping Symbol Power

Use parentheses and brackets to show what happens first.

GRADE 5 · TEKS 5.4.E

5.4.E "describe the meaning of parentheses and brackets in a numeric expression;"

NAME _____ DATE _____

GROUPING COMES FIRST

Parentheses ( ) show an operation that you must do first. Brackets [ ] group a larger part of an expression, often around parentheses. Work from the innermost grouping symbols outward, then follow the order of operations.

WORKED EXAMPLE

Evaluate [58 - (12 + 7)] x 9.

1. Add inside the parentheses: 12 + 7 = 19.
2. Subtract inside the brackets: 58 - 19 = 39.
3. Multiply: 39 x 9 = 351.

Answer: 351

PRACTICE 6 problems

1 Evaluate 37 - (8 + 6).

ANSWER _____

2 Evaluate [40 / (5 + 3)] + 8.

ANSWER _____

3 In 72 / (8 x 3), what do the parentheses tell you to do first?

ANSWER _____

4 Evaluate 42 - [6 x (3 + 1)].

ANSWER _____

5 Evaluate 10 + [24 / (8 - 5)].

ANSWER _____

6 Evaluate (30 - 14) / 4 + 6.

ANSWER _____

APPLY IT Show your work

1 A video game club earns 90 points. The club spends 16 points on one upgrade and 14 points on another upgrade. Then the club shares the remaining points equally among 6 players. Write and solve an expression with parentheses and brackets to find how many points each player gets.

WORK SPACE

ANSWER _____

2 A maker club has 90 beads. It puts 14 blue beads and 10 silver beads on each of 3 keychains. Write and solve an expression with parentheses and brackets to find how many beads are left.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Evaluate both expressions. Then write one sentence explaining why the answers are different: 45 - (8 + 5) x 3 and [45 - (8 + 5)] x 3.

WORK SPACE AND ANSWER

ANSWER KEY

Grouping Symbol Power

GRADE 5 · TEKS 5.4.E

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Evaluate 37 - (8 + 6).	**23**
2	Evaluate [40 / (5 + 3)] + 8.	**13**
3	In 72 / (8 x 3), what do the parentheses tell you to do first?	**Multiply 8 x 3 first.**
4	Evaluate 42 - [6 x (3 + 1)].	**18**
5	Evaluate 10 + [24 / (8 - 5)].	**18**
6	Evaluate (30 - 14) / 4 + 6.	**10**

PART 2 · APPLY IT

1. **[90 - (16 + 14)] / 6 = 10 points** Add the upgrade costs first, then subtract that total from 90. Divide the remaining 60 points by 6 players.
2. **90 - [(14 + 10) x 3] = 18 beads** Add the beads on one keychain, then multiply by 3 keychains. Subtract the 72 beads used from 90.

CHALLENGE

45 - (8 + 5) x 3 = 6. [45 - (8 + 5)] x 3 = 96. In the first expression, multiplication happens before subtraction, but the brackets in the second expression make subtraction happen before multiplication.

Accept equivalent expressions for the word problems if they use the grouping symbols correctly and give the correct result. For problem 3, accept wording that clearly states that 8 x 3 must be done before dividing.