MATH

Order of operations with parentheses

Name _____ Date _____

I can solve what is inside parentheses first.

1 How it works

Parentheses ( ) mean "do this part first". Solve inside the parentheses, then multiply and divide from left to right, then add and subtract from left to right. In (6 + 4) × 3 − 5, the parentheses give 10, then 10 × 3 = 30, and 30 − 5 = 25.

$$(6 + 4) \times 3 - 5$$
$$= 10 \times 3 - 5$$
$$= 30 - 5$$
$$= 25$$

2 Solve

Inside the brackets first.

1. $(4 + 8) \times (11 - 5) =$ ☐
2. $6 \times (11 + 6) - 6 =$ ☐
3. $8 \times (12 - 8) =$ ☐
4. $3 \times (10 - 4) =$ ☐
5. $(7 + 6) \times 2 =$ ☐
6. $4 \times (4 + 6) =$ ☐
7. $(6 + 7) \times 3 =$ ☐
8. $(9 - 7) \times 7 =$ ☐
9. $6 + (7 - 6) \times 5 =$ ☐
10. $(4 + 5) \div 9 =$ ☐

How did I do? ☆ ☆ ☆

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Show each step

Name _____ Date _____

I can show the steps in order.

1 Write one step on each line

One operation at a time.

1. $(2 + 4) \times 10$

= _____

= _____

2. $(12 + 4) \times 7$

= _____

= _____

3. $(10 - 3) \times 6$

= _____

= _____

4. $(11 + 2) \times 8$

= _____

= _____

2 Solve

1. $(8 - 2) \times 12 =$ ☐

2. $(12 - 10) \times 8 =$ ☐

3. $(5 + 8) \times 2 =$ ☐

4. $8 \times (3 + 7) - 12 =$ ☐

5. $10 \times (12 - 7) =$ ☐

6. $3 \times (5 + 4) =$ ☐

How did I do? ☆ ☆ ☆

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True or false?

Name _____ Date _____

I can check work and find mistakes.

1 Is it true? Circle true or false.

1. 11 × (9 – 3) = 96 — true / false
2. 12 × (6 + 4) – 6 = 70 — true / false
3. 6 + (10 – 2) × 12 = 102 — true / false
4. (3 × 10 – 6) ÷ 6 = 4 — true / false
5. 5 × (8 + 3) = 43 — true / false
6. (7 × 9 – 3) ÷ 2 = 30 — true / false

2 Find the mistake

They did not follow the order. Fix it.

Ben says 7 × (11 – 8) = 69.

The right answer is ☐ What went wrong? _____

Zara says (7 + 12) × (5 – 5) = 90.

The right answer is ☐ What went wrong? _____

3 Think about it

1. What is 5 × (6 – 6)? ☐
2. Do 3 × 4 + 2 and 3 × (4 + 2) give the same answer? ☐
3. Where do you start in 4 × (10 – 3) + 1? ☐

How did I do? ☆ ☆ ☆

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Word problems

Name _____ Date _____

I can write one expression for a problem and solve it.

1 Read, write an expression, solve

Show your expression in the box.

1 Ben has 4 bags with 6 cookies in each bag and 5 loose cookies. Write an expression and find how many cookies in all.

Answer:

2 Aisha buys 3 apples at 40 cents each and pays with $2 (200 cents). How much change? Write an expression first.

Answer:

3 A class has 2 boxes of 12 pencils and 6 more pencils. The pencils are shared by 5 tables. How many does each table get?

Answer:

4 Ben says 10 − 4 + 2 = 4, because you add first. Is Ben right?

Answer:

How did I do? ☆ ☆ ☆

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FOR TEACHERS AND PARENTS

Answer key: order of operations with parentheses

1 Page 1

Solve: 1) 72; 2) 96; 3) 32; 4) 18; 5) 26; 6) 40; 7) 39; 8) 14; 9) 11; 10) 1.

2 Page 2

1) (2 + 4) × 10 = 6 × 10 = 60
2) (12 + 4) × 7 = 16 × 7 = 112
3) (10 − 3) × 6 = 7 × 6 = 42
4) (11 + 2) × 8 = 13 × 8 = 104
Solve: 1) 72; 2) 16; 3) 26; 4) 68; 5) 50; 6) 27.

3 Page 3

True or false: 1) false; 2) false; 3) true; 4) true; 5) false; 6) true.
Mistake 1) 7 × (11 − 8) = 21 (7 × (11 − 8) = 7 × 3 = 21)
Mistake 2) (7 + 12) × (5 − 5) = 0 ((7 + 12) × (5 − 5) = (7 + 12) × 0 = 19 × 0 = 0)
Think: 1) 0; 2) No: 14 and 18; 3) Inside the parentheses: 10 − 3.

4 Page 4: word problems

1) 4 × 6 + 5 = 29 cookies
2) 200 − 3 × 40 = 80 cents
3) (2 × 12 + 6) ÷ 5 = 6 pencils
4) No. Add and subtract from left to right: 10 − 4 + 2 = 8.

5 Teaching tip

Show the same numbers with and without parentheses: 6 + 4 × 3 = 18 but (6 + 4) × 3 = 30. Seeing the answer change makes children take the parentheses seriously.

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