MATH

Placing parentheses

Name _____ Date _____

I can add parentheses to make an expression true.

1 How it works

Parentheses can change the answer. 2 + 3 × 4 = 14, because you multiply first. But (2 + 3) × 4 = 20, because the parentheses say add first. To make an expression equal a target, try the parentheses in different places and solve each one until it matches.

2 + 3 × 4 = 14

(2 + 3) × 4 = 20

Same numbers, new answer!

2 Add parentheses to make it true

Leave a little space for (and).

1. **10 × 9 + 7 = 160**
2. **8 × 10 − 10 = 0**
3. **4 × 2 + 8 = 40**
4. **9 + 5 × 2 = 28**
5. **7 + 4 × 5 = 55**
6. **10 × 10 + 2 = 120**
7. **6 × 5 + 6 = 66**
8. **6 × 5 − 2 = 18**

How did I do? ☆ ☆ ☆

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Longer expressions

Name _____ Date _____

I can use parentheses to change the answer.

1 Add parentheses to make it true

Try a few places. Check by solving.

1. 10 − 7 + 8 × 9 = 99

2. 9 × 8 − 10 + 4 = 58

3. 5 × 7 − 4 + 6 = 45

4. 2 × 4 + 2 × 6 = 60

2 Do the parentheses change the answer?

Solve both, then circle.

1. 5 + 3 × 9 and (5 + 3) × 9 — same / different
2. 6 + 5 × 4 and 6 + (5 × 4) — same / different
3. 9 + 3 × 2 and 9 + (3 × 2) — same / different
4. 7 + 6 × 9 and (7 + 6) × 9 — same / different
5. 7 + 6 × 5 and (7 + 6) × 5 — same / different
6. 8 + 4 × 4 and 8 + (4 × 4) — same / different

How did I do? ☆ ☆ ☆

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Make the number

Name _____ Date _____

I can use numbers, operations and parentheses to reach a target.

1 Use all three numbers once. Use +, −, × and parentheses.

Numbers: 2, 5, 7

Make 49: _____ **Make 17:** _____ **Make 24:** _____

Numbers: 5, 4, 3

Make 27: _____ **Make 23:** _____ **Make 35:** _____

Numbers: 6, 2, 4

Make 32: _____ **Make 16:** _____ **Make 36:** _____

3 Think about it

1. Why does (2 + 3) × 4 give a bigger answer than 2 + 3 × 4?
2. Do parentheses around 3 × 4 change 2 + 3 × 4?
3. Put parentheses in 20 − 5 − 3 to make 18.

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

Answer:

How did I do? ☆ ☆ ☆

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FOR TEACHERS AND PARENTS

Answer key: placing parentheses

1 Page 1

Parentheses: 1) 10 × (9 + 7) = 160; 2) 8 × (10 − 10) = 0; 3) 4 × (2 + 8) = 40; 4) (9 + 5) × 2 = 28; 5) (7 + 4) × 5 = 55; 6) 10 × (10 + 2) = 120; 7) 6 × (5 + 6) = 66; 8) 6 × (5 − 2) = 18.

2 Page 2

Parentheses: 1) (10 − 7 + 8) × 9 = 99; 2) 9 × 8 − (10 + 4) = 58; 3) 5 × (7 − 4 + 6) = 45; 4) (2 × 4 + 2) × 6 = 60.

Change: 1) different (32 and 72); 2) same (26 and 26); 3) same (15 and 15); 4) different (61 and 117); 5) different (37 and 65); 6) same (24 and 24).

3 Page 3

1) 49 = (2 + 5) × 7; 17 = 2 × 5 + 7; 24 = 2 × (5 + 7). Other ways may work too.

2) 27 = (5 + 4) × 3; 23 = 5 × 4 + 3; 35 = 5 × (4 + 3). Other ways may work too.

3) 32 = (6 + 2) × 4; 16 = 6 × 2 + 4; 36 = 6 × (2 + 4). Other ways may work too.

Think: 1) The 3 is added first, so 5 is multiplied by 4; 2) No. × is done first anyway; 3) 20 − (5 − 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

Encourage guess and check: write each try on scrap paper and solve it. Children soon notice that parentheses around a × or ÷ alone never change the answer, which saves them time.

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