LESSON MAKER PRO

Rewrite to Solve

Use properties to make calculations easier.

GRADE 6 · MA.6.NSO.3

MA.6.NSO.3 "Apply properties of operations to rewrite numbers in equivalent forms."

NAME _____ DATE _____

EQUIVALENT FORMS

Use the distributive property to break one factor across a sum or difference: a(b + c) = a*b + a*c. You can also switch or regroup addends and factors to make an expression easier while keeping the value the same.

WORKED EXAMPLE

Find 7(80 + 6).

1. Break 7 across the sum: 7(80 + 6) = 7*80 + 7*6.
2. Multiply each part: 7*80 + 7*6 = 560 + 42.
3. Add the partial products: 560 + 42 = 602.

Answer: 602

PRACTICE 6 problems

1 Use the distributive property to find 4(30 + 9).

ANSWER _____

2 Rewrite 23*12 using the distributive property. Then find the product.

ANSWER _____

3 Use the commutative and associative properties to add 18 + 35 + 82.

ANSWER _____

4 Find 16*25 by rewriting 16 as 4*4 and grouping the factors.

ANSWER _____

5 Rewrite 99 + 47 to make a friendly sum. Then find the sum.

ANSWER _____

6 Use the distributive property to find 15*34.

ANSWER _____

APPLY IT Show your work

1 A gaming club has 12 members. Each member earns 18 points for completing a quest and 2 bonus points for teamwork. Use a property of operations to find the total number of points earned.

WORK SPACE

ANSWER _____

2 A sports store sells 15 team water bottles. Each bottle costs $16, and printing a name costs $4 more per bottle. Use a property of operations to find the total cost.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find 48*25 without using the standard multiplication algorithm. Show an equivalent expression that makes the calculation easier.

WORK SPACE AND ANSWER

ANSWER KEY

Rewrite to Solve

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Use the distributive property to find 4(30 + 9).	**4*30 + 4*9 = 120 + 36 = 156**
2	Rewrite 23*12 using the distributive property. Then find the product.	**23*(10 + 2) = 230 + 46 = 276**
3	Use the commutative and associative properties to add 18 + 35 + 82.	**18 + (35 + 82) = 18 + 117 = 135**
4	Find 16*25 by rewriting 16 as 4*4 and grouping the factors.	**(4*4)*25 = 4*(4*25) = 4*100 = 400**
5	Rewrite 99 + 47 to make a friendly sum. Then find the sum.	**(99 + 1) + 46 = 100 + 46 = 146**
6	Use the distributive property to find 15*34.	**15*(30 + 4) = 450 + 60 = 510**

PART 2 · APPLY IT

1. **240 points** Write 12(18 + 2). Add inside the parentheses, then multiply: 12*20 = 240.
2. **$300** Write 15(16 + 4). Add inside the parentheses, then multiply: 15*20 = 300.

CHALLENGE

48*25 = (12*4)*25 = 12*(4*25) = 12*100 = 1200

Accept any equivalent expression that correctly uses the distributive, commutative, or associative property and gives the correct value. For the challenge, accept any valid regrouping that creates an easier product, such as 4*25 = 100.