LESSON MAKER PRO

Make Math Click

Rewrite expressions to make calculations easier.

GRADE 6 · 6.A.2.1

6.A.2.1 "Generate equivalent expressions and evaluate expressions involving positive rational numbers by applying the commutative, associative, and distributive properties and order of operations to model and solve mathematical problems."

NAME _____ DATE _____

A USEFUL SHORTCUT

To multiply a sum, multiply each addend by the number outside the parentheses. You can also change the order or grouping of numbers you add or multiply to make the arithmetic easier. Work inside parentheses first, then multiply or divide, then add or subtract.

WORKED EXAMPLE

Use the distributive property to rewrite and evaluate 7/8(16 + 24).

1. 7/8(16 + 24) = (7/8 x 16) + (7/8 x 24)
2. = (7 x 2) + (7 x 3)
3. = 14 + 21

Answer: 35

PRACTICE 6 problems

1 Use the distributive property to rewrite 1/2(6 + 4), then find its value.

ANSWER _____

2 Use the distributive property to rewrite (1.5 + 2.5) x 3, then find its value.

ANSWER _____

3 Rewrite 3/4 x 12 + 3/4 x 4 as one product, then find its value.

ANSWER _____

4 Change the order and grouping of 0.25 x 11 x 4 to make it easier to multiply. Write the new expression and its value.

ANSWER _____

5 Evaluate 4 + 1/3(9 + 6).

ANSWER _____

6 Evaluate 5/6(18 + 12) - 2.

ANSWER _____

APPLY IT Show your work

1 A gaming club buys 5 sticker packs for $2.25 each and 5 card packs for $1.75 each. Write an expression that groups the cost of one sticker pack and one card pack. Then find the total cost.

WORK SPACE

ANSWER _____

2 You edit 3 video clips. You spend 2.5 minutes trimming and 1.5 minutes adding captions to each clip. Uploading all the clips takes 2 more minutes. Write an expression and find the total time.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Maya says 1/2(10 + 18) + 3 = 1/2 x 10 + 18 + 3 = 26. Is she correct? Write a correct equivalent expression, find its value, and explain her mistake.

WORK SPACE AND ANSWER

ANSWER KEY

Make Math Click

GRADE 6 · 6.A.2.1

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Use the distributive property to rewrite 1/2(6 + 4), then find its value.	**(1/2 x 6) + (1/2 x 4) = 5**
2	Use the distributive property to rewrite (1.5 + 2.5) x 3, then find its value.	**(1.5 x 3) + (2.5 x 3) = 12**
3	Rewrite 3/4 x 12 + 3/4 x 4 as one product, then find its value.	**3/4(12 + 4) = 12**
4	Change the order and grouping of 0.25 x 11 x 4 to make it easier to multiply. Write the new expression and its value.	**(0.25 x 4) x 11 = 11**
5	Evaluate 4 + 1/3(9 + 6).	**9**
6	Evaluate 5/6(18 + 12) - 2.	**23**

PART 2 · APPLY IT

1. **5(2.25 + 1.75) = $20.00** Group one of each pack as a $4.00 pair. Five pairs cost $20.00.
2. **3(2.5 + 1.5) + 2 = 14 minutes** Each clip takes 4 minutes to edit, so editing takes 12 minutes. Add 2 minutes for uploading.

CHALLENGE

No. (1/2 x 10) + (1/2 x 18) + 3 = 17. Maya forgot to multiply 18 by 1/2.

Accept equivalent expressions that preserve the value, including expressions that add inside parentheses before multiplying. For the challenge, the explanation must identify that both addends inside the parentheses are multiplied by 1/2.