LESSON MAKER PRO

Expression Makeover

Rewrite expressions to reveal how quantities are connected.

GRADE 7 · 7.EE.A.2

CCSS.Math.Content.7.EE.A.2 "Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. For example..."

NAME _____ DATE _____

SEE THE RELATIONSHIP

Equivalent expressions have the same value, even when they look different. Combine like terms, distribute, factor, or use a multiplier to show a relationship more clearly. For percent changes, the multiplier shows what part of the original amount remains or grows.

WORKED EXAMPLE

Rewrite 6t + 2t as one term.

1. Both terms have t.
2. Add the coefficients: 6 + 2 = 8.
3. Write 8t.

Answer: 8t

PRACTICE 6 problems

1 Rewrite 0.4x + 0.6x as one term.

ANSWER _____

2 Use the distributive property to rewrite 3(y + 5) without parentheses.

ANSWER _____

3 Factor 15n + 20 using the greatest common factor.

ANSWER _____

4 Rewrite p - 0.25p as one term.

ANSWER _____

5 A game costs g dollars. Its price increases by 10%. Rewrite g + 0.10g as a single multiplier times g.

ANSWER _____

6 A hoodie costs h dollars. It is discounted 30%. Rewrite h - 0.30h as a single multiplier times h.

ANSWER _____

APPLY IT Show your work

1 An online game pass costs $40. A sale takes 15% off. Write an expression using one multiplier times 40, then find the sale price.

WORK SPACE

ANSWER _____

2 For a school tournament, a team raises $35 from donations. A sponsor adds 40% of that amount. Rewrite 35 + 0.40(35) as one multiplier times 35, then find the total.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A music app subscription costs p dollars. The price rises 50%, then a coupon takes 10% off the increased price. Rewrite the final price as one multiplier times p. Is the final price greater or less than p, and by what percent?

WORK SPACE AND ANSWER

ANSWER KEY

Expression Makeover

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Rewrite 0.4x + 0.6x as one term.	**x**
2	Use the distributive property to rewrite 3(y + 5) without parentheses.	**3y + 15**
3	Factor 15n + 20 using the greatest common factor.	**5(3n + 4)**
4	Rewrite p - 0.25p as one term.	**0.75p**
5	A game costs g dollars. Its price increases by 10%. Rewrite g + 0.10g as a single multiplier times g.	**1.10g**
6	A hoodie costs h dollars. It is discounted 30%. Rewrite h - 0.30h as a single multiplier times h.	**0.70h**

PART 2 · APPLY IT

1. **0.85(40) = $34** A 15% discount leaves 85% of the original price. Multiply 40 by 0.85 to get $34.
2. **1.40(35) = $49** The original amount plus 40% is 140% of the original amount. Multiply 35 by 1.40 to get $49.

CHALLENGE

1.35p; the final price is greater than p by 35%.

Accept equivalent forms such as 1.1g for 1.10g and 0.7h for 0.70h. For the challenge, accept 1.5(0.9p) if the student also identifies the combined multiplier as 1.35.