LESSON MAKER PRO

Model the Money

Write expressions, equations, and inequalities for everyday costs.

GRADE 6 · 6.A.3.1

6.A.3.1 "Model mathematical situations using expressions, equations and inequalities involving variables and rational numbers."

NAME _____ DATE _____

FROM WORDS TO MATH

Let x stand for an unknown amount. Use an expression to show a cost, an equation when two amounts are equal, or an inequality when there is a limit. To solve an equation, keep both sides equal by doing the same operation to each side.

WORKED EXAMPLE

A sticker costs $1.40. You spend $9.80 on stickers. Write and solve an equation for x, the number of stickers.

1. Cost per sticker × number of stickers = total cost, so 1.40x = 9.80.
2. Divide both sides by 1.40: x = 9.80 / 1.40.
3. x = 7.

Answer: 7 stickers

PRACTICE 6 problems

1 A notebook costs $2.25, and a one-time fee is $3. Write an expression for the total cost of x notebooks.

ANSWER _____

2 A club charges $4 to join and $1.50 per event. You spend $13 in all. Write and solve an equation for x, the number of events.

ANSWER _____

3 You have $20. Each download costs $2.50. Write an inequality, then find the greatest whole number x of downloads you can buy.

ANSWER _____

4 Four friends share x cups of trail mix equally. Each friend also gets 1/2 cup from another bag. Write an expression for the cups each friend gets.

ANSWER _____

5 A team needs at least 18 points. It has 6 points and earns 3 points per round. Write an inequality for x, the number of rounds it plays.

ANSWER _____

6 A shuttle ride costs $3.25. You spend exactly $16.25 on rides. Write and solve an equation for x, the number of rides.

ANSWER _____

APPLY IT Show your work

1 You have $18.25 for a school fair. An entry pass costs $4.50, and each game costs $2.75. Write an inequality and find the greatest whole number x of games you can play.

WORK SPACE

ANSWER _____

2 A music app gives you a $6 credit toward song packs. Each pack costs $3.50. After using the credit, you pay $15. Write and solve an equation for x, the number of packs you bought.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Plan A charges a $9 start fee plus $1.50 per song. Plan B charges a $3 start fee plus $2.25 per song. Write and solve an equation to find x, the number of songs for which the plans cost the same. What is that cost?

WORK SPACE AND ANSWER

ANSWER KEY

Model the Money

GRADE 6 · 6.A.3.1

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A notebook costs $2.25, and a one-time fee is $3. Write an expression for the total cost of x notebooks.	**2.25x + 3**
2	A club charges $4 to join and $1.50 per event. You spend $13 in all. Write and solve an equation for x, the number of events.	**4 + 1.50x = 13; x = 6 events**
3	You have $20. Each download costs $2.50. Write an inequality, then find the greatest whole number x of downloads you can buy.	**2.50x ≤ 20; 8 downloads**
4	Four friends share x cups of trail mix equally. Each friend also gets 1/2 cup from another bag. Write an expression for the cups each friend gets.	**x/4 + 1/2**
5	A team needs at least 18 points. It has 6 points and earns 3 points per round. Write an inequality for x, the number of rounds it plays.	**6 + 3x ≥ 18**
6	A shuttle ride costs $3.25. You spend exactly $16.25 on rides. Write and solve an equation for x, the number of rides.	**3.25x = 16.25; x = 5 rides**

PART 2 · APPLY IT

1. **4.50 + 2.75x ≤ 18.25; 5 games** Subtract 4.50 to get 2.75x ≤ 13.75. Divide by 2.75 to get x ≤ 5.
2. **3.50x − 6 = 15; x = 6 packs** Add 6 to both sides to get 3.50x = 21. Divide by 3.50 to get x = 6.

CHALLENGE

9 + 1.50x = 3 + 2.25x; x = 8 songs; both plans cost $21

Accept equivalent expressions and equations. For inequalities about purchases, x must be a nonnegative whole number.