LESSON MAKER PRO

Inequality Translator

Turn real situations into math statements.

GRADE 7 · 7.PFA.4.d

7.PFA.4.d "Write one- or two-step linear inequalities in one variable to represent a verbal situation, including those in context."

NAME _____ DATE _____

TRANSLATE THE situation

Let x stand for the unknown amount. Use words such as at least and no more than to choose the inequality sign, then write the operations described in the situation. Keep the total amount on one side of the inequality.

WORKED EXAMPLE

A music app charges a $4 start-up fee and $3 for each month. You can spend no more than $22. Write an inequality for x months.

1. Let x = number of months.
2. The monthly cost is 3x.
3. Add the $4 fee: 3x + 4.
4. No more than means less than or equal to 22.

Answer: 3x + 4 <= 22

PRACTICE 6 problems

1 You need more than 17 points to earn a badge. Let x be your number of points. Write an inequality.

ANSWER _____

2 You can collect at most 28 stickers. Let x be the number of stickers. Write an inequality.

ANSWER _____

3 You have x beads and get 9 more. You will have at least 25 beads. Write an inequality.

ANSWER _____

4 A game costs x dollars, plus a $6 service fee. The total cost is less than $31. Write an inequality.

ANSWER _____

5 Each arcade game costs $7. You can spend no more than $42 on x games. Write an inequality.

ANSWER _____

6 A team shares x points equally among 5 players. Each player then gets 2 bonus points and has at least 13 points. Write an inequality.

ANSWER _____

APPLY IT Show your work

1 Maya has $48 for a fan-club order. She buys a club shirt for $11 and x patches that cost $4 each. Write an inequality that shows how many patches she can buy without spending more than $48.

WORK SPACE

ANSWER _____

2 Your tablet has 64 GB of storage. It already has 18 GB used, and each video you download uses 3 GB. Write an inequality for x videos that will keep the total storage used at 64 GB or less.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

You start a game with x coins. You buy 5 power-ups that cost 7 coins each and want to have more than 19 coins left. Write an inequality and explain why you chose the inequality sign.

_____

_____

ANSWER KEY

Inequality Translator

GRADE 7 · 7.PFA.4.d

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	You need more than 17 points to earn a badge. Let x be your number of points. Write an inequality.	**x > 17**
2	You can collect at most 28 stickers. Let x be the number of stickers. Write an inequality.	**x <= 28**
3	You have x beads and get 9 more. You will have at least 25 beads. Write an inequality.	**x + 9 >= 25**
4	A game costs x dollars, plus a $6 service fee. The total cost is less than $31. Write an inequality.	**x + 6 < 31**
5	Each arcade game costs $7. You can spend no more than $42 on x games. Write an inequality.	**7x <= 42**
6	A team shares x points equally among 5 players. Each player then gets 2 bonus points and has at least 13 points. Write an inequality.	**x/5 + 2 >= 13**

PART 2 · APPLY IT

1. **4x + 11 <= 48** Let x be the number of patches. The patches cost 4x dollars, and adding the $11 shirt cost must be no more than $48.
2. **3x + 18 <= 64** Let x be the number of videos. Add the 18 GB already used to 3 GB for each video, and keep the total at 64 GB or less.

CHALLENGE

x - 35 > 19. Five power-ups cost 35 coins, and "more than 19" means >.

Accept equivalent inequalities with the two sides reversed and the inequality sign reversed, such as 48 >= 4x + 11. Accept x - 35 > 19 or x - 5(7) > 19 for the challenge.