

METHOD 2

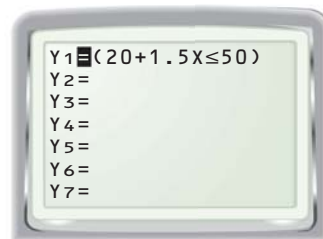
Using a Graph Another approach is to use a graph.

If your graphing calculator has a *test* feature, you can enter the inequality and evaluate its truth for various values of x .

- When the inequality is *true*, the calculator returns a 1.
- When the inequality is *false*, the calculator returns a 0.

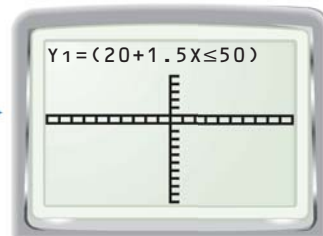
STEP 1 Enter $y = (20 + 1.5x \leq 50)$ into a graphing calculator.

Press **2nd** [TEST] **6** to enter the \leq symbol.



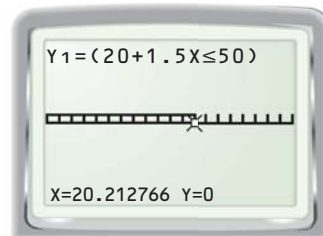
STEP 2 Graph the result.

The y-value is 1 for all x-values that make the inequality true.



STEP 3 Find the point where the inequality changes from true to false by using the *trace* feature.

- ▶ The graph suggests that the inequality is true when $x \leq 20$. So, you can play the game at the fair 20 times or fewer.



PRACTICE

1. **REASONING** Determine the equation that gives the table below. For what x -values is $y < -500$?

X	Y ₁
0	200
1	165
2	130
3	95
4	60

X=0

2. **GIFT** You have \$16.50 to spend for a friend's birthday. You spend \$3 on a card and want to buy some chocolates that cost \$.75 each. What are the numbers of chocolates you can buy? Solve using a table and using a graph.

3. **SALESPERSON** A salesperson has a weekly salary of \$1550 and gets a 5% commission on sales. What are the amounts the salesperson can sell to earn at least \$1900 per week? Solve using a table and using a graph.

4. **WRITING** Explain how to use a table like the one below to solve $0.5x - 1.5 \leq 3 - 0.4x$.

X	Y ₁	Y ₂
0	-1.5	3
1	-1	2.6
2	-.5	2.2
3	0	1.8
4	.5	1.4

X=0