



STUDENT COMPANION

NAME: _____



How many weeks would it take Terry to save enough money to purchase the E5 gaming system?

Please make the following assumptions:

- 7% sales tax will be applied
- There are 180 days in a school year
- 5 days make up one 1 school week

The logo for "Think e Matics" is displayed in a large, stylized, purple font. Above the text is a colorful, abstract brain-like shape composed of many overlapping loops in shades of blue, green, yellow, and red.

If Terry saved from the start of the school year to the end, how much money would he save including the original \$125?

TGA: EXTEND YOUR THINKING 1 continued

Write a linear equation that describes Terry's plan.

Equation: _____

Construct a table of values for Terry's plan and graph the relationship. Identify the slope and the y-intercept. Is the relationship proportional? Why or why not?

Week	Savings
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Week	Savings
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	

TGA: EXTEND YOUR THINKING 1 continued



TGA: EXTEND YOUR THINKING 1 continued

Slope: _____

Y-Intercept: _____

Construct two similar triangles on your coordinate grid to help you identify the slope of the line. Describe how the triangles are useful to calculate the slope of the line.

How does the slope of the line directly apply to Terry's plan?

Extend
2.
Your Thinking

Terry's Gaming Adventure
Hailing a Cab

If The Game Depot is 2.75 miles away from Terry's apartment, which cab service should he select? Explain the strategy you utilized to ascertain your solution.

Super Taxi		Relaxi Taxi	
Mile	Cost	Mile	Cost

How many miles would Terry have to travel in the taxicab for the cost to be the same regardless of which service he selects? Describe the strategy you utilized to arrive at this determination.

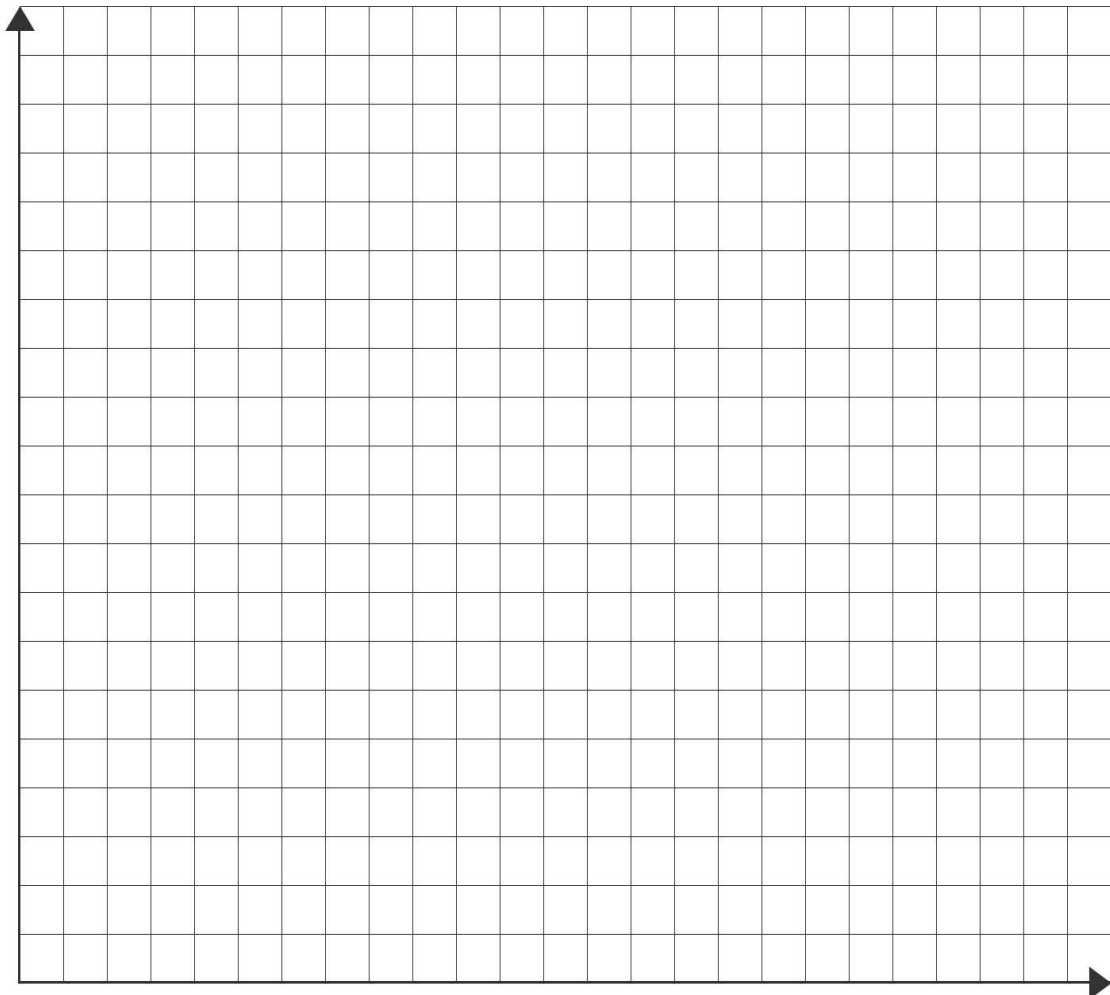
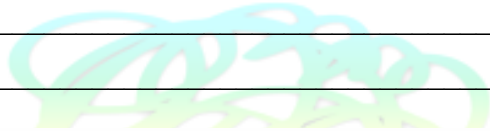
TGA: EXTEND YOUR THINKING 2 continued

Describe how Terry could use systems of equations to help him determine which taxicab service he should select.



TGA: EXTEND YOUR THINKING 2 continued

Explain another strategy that you could utilize to determine which taxicab service Terry should select. What strategy do you feel is more effective?





If Syclon released the E5 at \$499 and then marked up the price to \$549, what was the percent increase of the gaming console? Describe how to determine the percent increase of the E5.



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What would be the total cost if Terry purchases the E5 and Cyber Troopers: Robot Wars, if Terry applies the 15% discount to his total? Do not omit the 7% sales tax.

TGA: EXTEND YOUR THINKING 3 continued

Terry assumed that if he received an additional 10% off the already reduced price which included a 15% reduction, he would actually be receiving a 25% discount. Is Terry's assumption correct? Why or why not?



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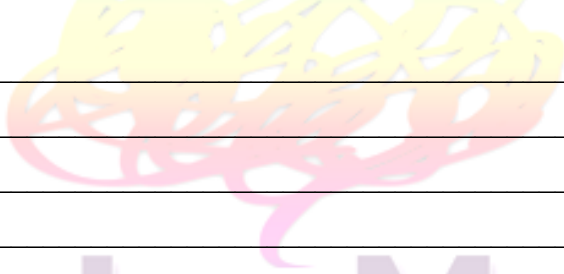
Extend
4
Your Thinking



How much did Terry pay in taxicab fares for both trips combined? (Round to the nearest penny)?

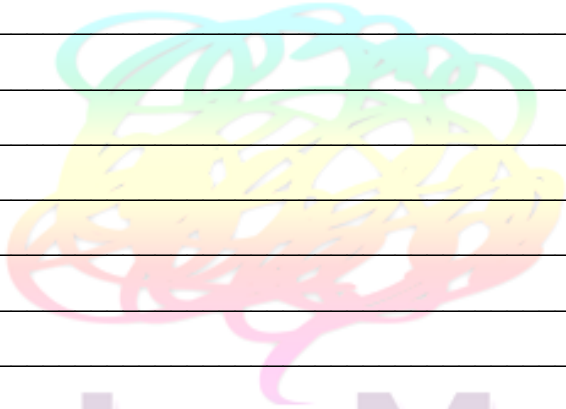
If Terry wanted to tip the driver 20%, describe a strategy Terry could utilize to quickly estimate how much tip he could give the driver.

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Equation: _____

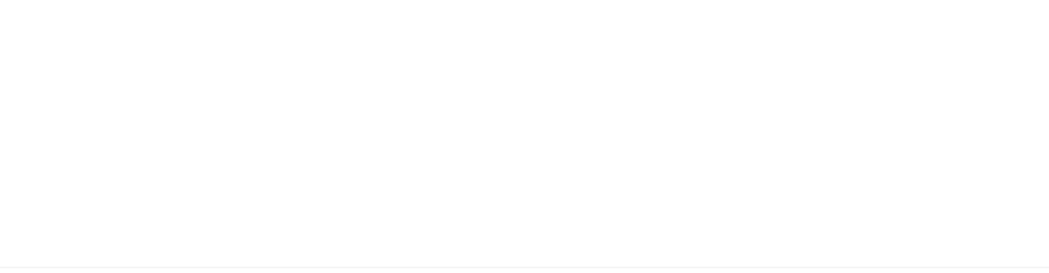


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[illegible]

TGA: EXTEND YOUR THINKING 4 continued

How many possible access keys can be created using the required specifications assuming repeats are allowed? How many if repeats are not allowed?



Do you think Terry's little brother could easily determine the access key and begin gaming? Why or why not?

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