

ESCAPE ROOM ACTIVITY




EQUATIONS
ESCAPE

Cha

a line that is perpendicular to
plate below. Not all equations

PARALLEL LINE PERPEN


LINEAR EQUATIONS
ESCAPE



Directions: Each problem requires that you write an equation and solve for a certain value. Record the equation number and solution number from the boxes below.

A Ava is ordering nail polish for her salon from a website that offers flat rate shipping. If each bottle of nail polish is \$8, write an equation in slope-intercept form to represent the total cost, y , to purchase x bottles of nail polish.

LINEAR EQUATIONS
ESCAPE



Directions: Record each answer in the corresponding row of the table below.

Use for a, b, and c: The table to the right shows the score each week at the escape room.

LINEAR EQUATIONS

Unit Review

in standard form that shows the possible number of admission tickets, x , and student tickets, y , that were sold if the total number of student tickets sold if 240 were admission tickets.

PROBLEM A		PROBLEM B		PROBLEM C	
Equation	Solution	Equation	Solution	Equation	Solution

d. Using linear regression, write an equation for the line of best fit to represent the value of the card, y , in years since 2006, x . Round to the nearest hundredth where necessary. Use your equation to find the value of the card in 2030.

Year	Value
2010	418
2015	385
2018	300
2018	255



LINEAR EQUATIONS ESCAPE

TEACHER DIRECTIONS

WHAT IS THIS? This Linear Equations Escape Room Activity is a fun and challenging way for students to review concepts taught throughout the Linear Equations unit in Algebra 1. This particular activity includes 6 challenge puzzles, each revealing a 3-digit, 4-digit, or 5-letter code. If students successfully crack each code, they will have "escaped the room" and earn a prize.

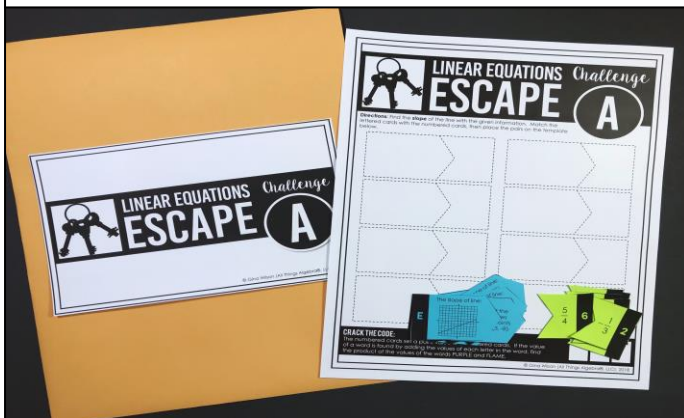
PREPARING THE ACTIVITY:

Place the challenge contents into manila envelopes. There are envelope labels provided if you wish to use them. I recommend laminating the challenge cards if possible so students can write on them with dry erase markers.

TOPICS AND CONTENTS FOR EACH CHALLENGE ENVELOPE:

CHALLENGE A:

Slope (ordered pairs, graphs, equations)



Contents: Challenge Card, Puzzle Pieces

CHALLENGE B:

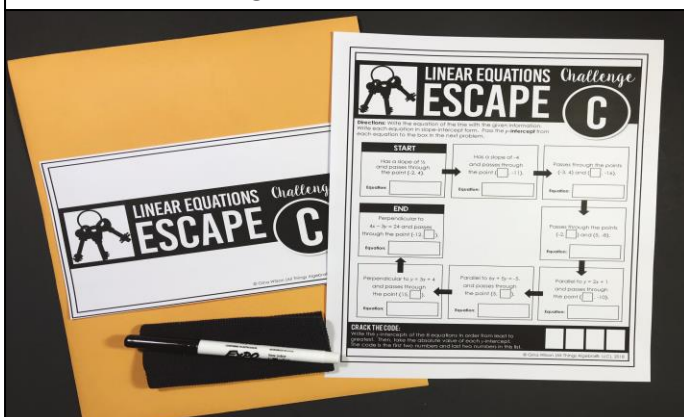
Graphing Linear Equations



Contents: Challenge Card, Dry Erase Marker, Ruler, Felt or Paper Towel to Erase

CHALLENGE C:

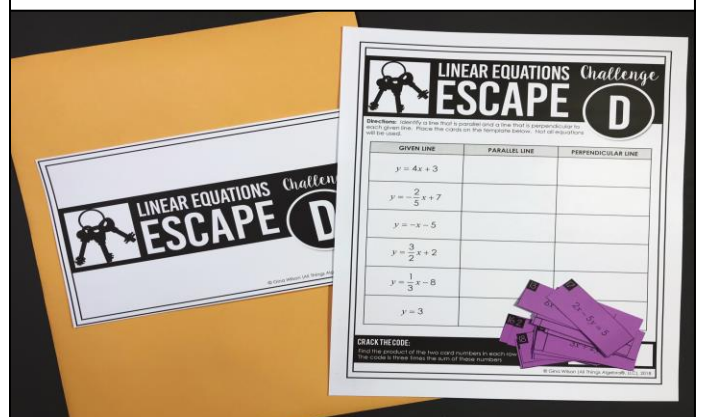
Writing Linear Equations



Contents: Challenge Card, Dry Erase Marker, Felt or Paper Towel to Erase

CHALLENGE D: Identifying

Parallel & Perpendicular Equations



Contents: Challenge Card, Puzzle Pieces

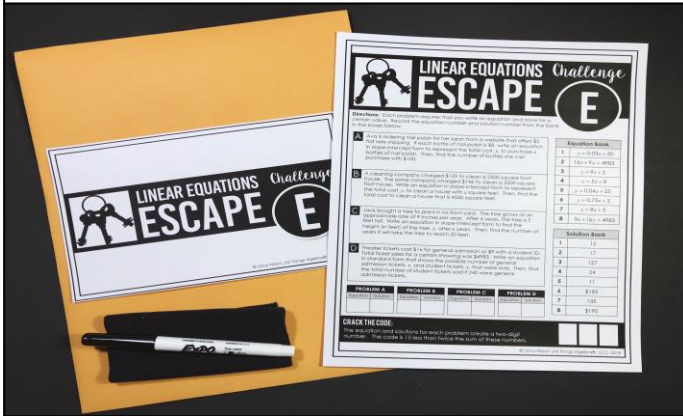


LINEAR EQUATIONS ESCAPE

TEACHER DIRECTIONS

CHALLENGE E:

Linear Word Problems



Contents: Challenge Card, Dry Erase Marker, Felt or Paper Towel to Erase

CHALLENGE F:

Linear Regression



Contents: Challenge Card, Dry Erase Marker, Felt or Paper Towel to Erase

Additional Notes & Recommendations:

- Make a few envelopes for each challenge just in case more than one group is working on the same challenge at the same time.
- For challenge F, you will need metal fastener brads for the decoder wheel.
- As students bring challenge envelopes back to you, ensure all contents are there and everything has been erased from the challenge card.
- To cut down on some prep, you can have the students cut out the puzzle pieces and decoder wheel if you wish.



LINEAR EQUATIONS ESCAPE

TEACHER DIRECTIONS

DIRECTIONS TO PLAY:

- I recommend solving each challenge yourself ahead of time just so you are familiar with the contents.
- Decide on which challenges you will use for the game. Each challenge takes around 15 minutes or so, assuming groups are working together without one person doing all the work. Challenges be completed in any order and are independent of each other so you can remove challenges to differentiate and cut down on time. Or, block off a few class periods and do them all!
- Break your students into groups. You can decide on group sizes that work best for your class. Students will need pencils, scrap paper, and calculators to work out the math problems.
- Give each group the half-sheet to record their codes as they solve the challenges. There is also an explanation of the activity on this paper and a place for students to write their team name.
- Decide on a prize for successfully completing all challenges. Some ideas include pencils, erasers, candy, a pizza party for the team, ice cream coupons, lunch with the principal, no homework passes, etc.
- Give each group a manila envelope containing a challenge. They work together to solve the challenge and crack the code. Remind them to work quietly so another group doesn't overhear a code!
- Ways to check student codes:

Method 1: Students can bring their paper up to you and you can check the code against your answer key.

Method 2: Students can use a device and check the codes digitally using this form:

http://bit.ly/linear_equations_escape

- Each time they crack a code, they come to you for their next challenge. Since the challenges are not linked together, it does not matter which order they solve them in. So they can take whatever challenge is available.
- Once they have successfully cracked all the codes, they get their prize! If some groups don't finish, that is OK! A typical commercial escape room has a 15-30% escape rate.