FACTORY
FIELD TRIP

6th Grade Math

Factoring & Distributing

Digital or Print Escape Room

SAFE COMBINATION

Step 1: The first step in finding the combination is combining like terms.

Combine the like terms. Write down the simplified expressions.

$p + 3 + 2p + 7$

$- 6s + 9 + 2s - 6$

$9y - 4 - 6y$

CLUE 5

All systems are up and running! The doors will unlock once we catch up on organizing boxes for distribution.

We need to help the distribution team get the shipping labels printed. Let's head back to the control panel. To print out the shipping labels, we need to factor with the distributive property. Factor out the greatest common factor.

$27a + 18 =$

$24x - 16y + 4 =$

$63p + 45g - 18 =$

Awesome, we've gotten all of the shipping labels made. The last thing we need to do is figure out what boxes to put them on. It's time to distribute! Make an equivalent expression using the distributive property.

$3(x + 2y + 3z) =$

$5(4a - 2b - 7c) =$

$7(2d + 8e - 4f) =$

The Great CLASSROOM ESCAPE

Fast Facts

✂ Low prep digital! Easy to use printable version!
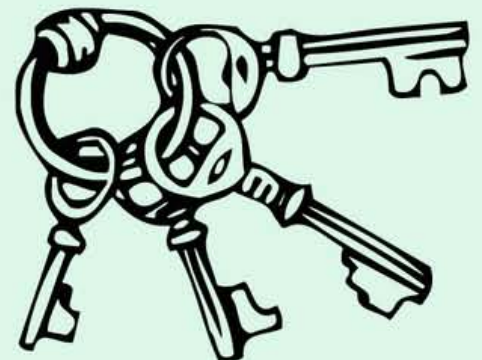
🕐 Escape Time ~45-60 minutes

👤 Recommended for pairs or small groups

🖥 Digital version requires internet connected device
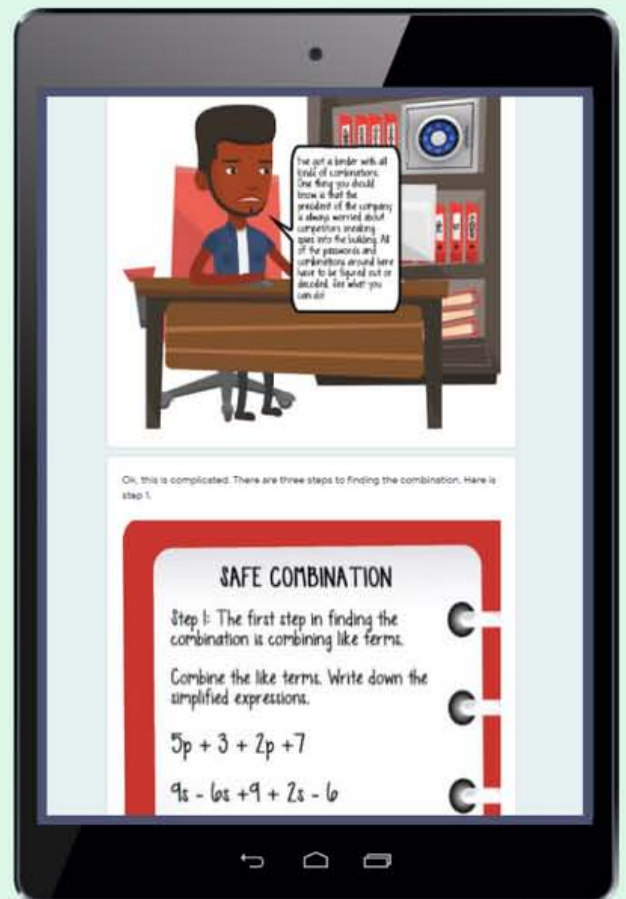
✔ Self-Checking (digital)

💻 Virtual or in-person

🧩 Five Engaging Puzzles

How it Works (Digital):

- The escape room is automated by a Google Form™ (Google™ accounts are not required).

- Use the quick start link to click & go, or create a copy of the form to save to your drive (the teacher must have a Google Account to save a copy).

- Students only progress through the puzzles when correct answers are entered.

- The form provides hints if students enter incorrect answers.

Optional Invitation and one page to print for digital version

"Visitor Passes" (Exit Ticket)

COOL KIDS CALCULATOR COMPANY VISITOR'S PASS	COOL KIDS CALCULATOR COMPANY VISITOR'S PASS
NAME:	NAME:
VISITOR ID: ALGEBRAIC	VISITOR ID: ALGEBRAIC
SECURITY LEVEL:	SECURITY LEVEL:
(ASSIGNED AT END OF TOUR)	(ASSIGNED AT END OF TOUR)

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Success Signs

EXCELLENT EVALUATOR

The Great
CLASSROOM
ESCAPE

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How it Works (Print Version):

- **There will be 6 pages to print per group. These include a backstory, clues, and a success page.**
- **You can choose to print optional success signs**
- **Give students the backstory page and the first clue.**
- **Check that students have solved the puzzles correctly, then pass out clues in order.**

The safe is open! Wow, that's a lot of cash. We better leave that there and stay focused on the task at hand. There's a letter in the envelope that says to open the "Factor and Distribute" file on the computer. There's also a grid with a bunch of letters.

Factor and Distribute

The password to restore the factory distribution center's operating system can be found by factoring and distributing!

Find equivalent expressions. Match the expression in a row with its equivalent expression in one of the columns. Check only one box per row and one box per column. When you're finished, match up your check marks with the letters on the grid. Unscramble the word to find the password!

D	W	Q	K	B
J	L	T	O	G
N	R	C	Z	E
A	V	F	H	I
X	M	S	U	A

	18y+27	24y+27	18y+24	18y+15	24y+18
6(3y+4)	☐	☐	☐	☐	☐
6(3y+1)	☐	☐	☐	☐	☐
6(4y+3)	☐	☐	☐	☐	☐
9(2y+3)	☐	☐	☐	☐	☐
3(6y+5)	☐	☐	☐	☐	☐

Restore Password: _____

CLUE 2

We need to help the distribution team get the shipping labels printed. Let's head back to the control panel. To print out the shipping labels, we need to factor with the distributive property. Factor out the greatest common factor.

27a+18b = _____

24x-16y+4 = _____

63p+45q-18 = _____

Awesome, we've gotten all of the shipping labels made. The last thing we need to do is figure out what boxes to put them on. It's time to distribute! Make an equivalent expression using the distributive property.

3(x+2y+3z) = _____

5(4a-2b-7c) = _____

7(2d+8e-4f) = _____

The Back Story

You are on a class field trip to the Cool Kids Calculator Factory. The president of the company is directing the tour herself. She's a rather suspicious woman and keeps talking about spies trying to sneak into her factory. So far on the tour, you've seen plastic poured into molds, microchips inserted, and the calculators being tested and put into boxes. You are now in the factory distribution center, your last stop on the tour.

While standing at the control panel at the entrance to the distribution center, the president tells you that there is one last security check...

Great job, the tablet is unlocked. Now we need that reset password!

To restore order to the scanners, simply follow the order of operations.

$\frac{1}{2}(3 \cdot 6) + 3^2 =$

$(2^2 \cdot 5) \cdot (\frac{1}{2})^2 =$

$11 \cdot 2 - 24(\frac{1}{3})^3 =$

$\frac{1}{3}(4^2 - 1) =$

$(2 + 4)^2 - (2 + 2)^2 =$

Now simply take your answers and substitute them for letters: a=1, b=2, c=3... z=26 and you'll have the password.

CLUE 4

The code to unlock this tablet is my birthday! Can you evaluate what that is?

Month: $5b^3 - 3c + a$ when b=2, c=5, and a=6

Day: $\frac{3}{4}(6v)$ when...

Year: ...

CLUE 3

EXCELLENT EVALUATOR

The Great Classroom Escape

Puzzle Preview

SAFE COMBINATION

Step 1: The first step in finding the combination is combining like terms.

Combine the like terms. Write down the simplified expressions.

$5p + 3 + 2p + 7$

$9s - 6s + 4$

$8 + 9y - 1$

Step 2: Find the values of the variables. Use the simplified expressions you created in step one and follow these clues:

The value of p is 10 less than the product of 3 and the coefficient of s in your second expression. p=?

The value of s is the product and 24.

The value of y equals the sum the coefficients in your simpli expressions divided by 5.

Step 3: Evaluate the expressions with the value you found for the variable.

You've got the three number combination of the safe!

$7n + 10$ $n=5$

D	W	Q	K	B
J	L	T	O	G
N	R	C	Z	E
A	V	F	H	I
X	M	S	U	A

	18y+27	24y+8	18y+24	18y+15
6(3y+4)	☐	☐	☐	☐
8(3y+1)	☐	☐	☐	☐
6(4y+3)	☐	☐	☐	☐
9(2y+3)	☐	☐	☐	☐
3(6y+5)	☐	☐	☐	☐

The code to unlock this tablet is my birthday! Can you evaluate what that is?

Month: $5b^2 - 3c + a$
when b=2, c=5, and a=6

Day: $\frac{x}{3}(6y)$
when x=2, and y=4

Year: $2r^3 + s^3 + 1$
when r=2, and s=4

Puzzle Preview

To restore order to the scanners, simply follow the order of operations.

$\frac{1}{2}(3 \cdot 6) + 3^2 =$

$(2^2 \cdot 5) \cdot (\frac{1}{2})^2 =$

$11 \cdot 2 - 24(\frac{1}{2})^3 =$

$\frac{1}{3}(4^2 - 1) =$

$(2 + 4)^2 - (2 + 2)^2 =$

Now simply take your answers and substitute them for letters: a=1, b=2, c=3… z=26 and you'll have the password.

Print the Shipping Labels

All systems are up and running! The doors will unseal once we catch up on organizing boxes for distribution.

We need to help the distribution team get the shipping labels printed. Let's head back to the control panel. To print out the shipping labels, we need to factor with the distributive property. Factor out the greatest common factor. Example: 18x+12y+24= 6(3x+2y+4) Enter your new expressions with no spaces in them.

27a+18b= (keep the variables in the same order in your answer) *

Your answer

24x-16y+4= *

Your answer

63p+45q-18= *

Your answer

Awesome, we've gotten all of the shipping labels made. The last thing we need to do is figure out what boxes to put them on. It's time to distribute! Make an equivalent expression using the distributive property. Keep the terms in the same order as in the original expression.

3(x+2y+3z)= *

Your answer

5(4a-2b-7c)= *

Your answer

7(2d+11e-4f)= *

Your answer

You May Also Like

The Great Classroom Escape
OPERATION SAVE THE ROCKET LAUNCH
Evaluating Expresions Word Problems

EASY TO IMPLEMENT!

PIN Digit 4
How much space is left?

The expression $c^3 - 8d$ gives the number of cubic feet of storage space that remain in a cube shaped container that the rocket is taking to the space station. How much space is left in the container if $c = 3$ and $d = 24$?

Four digit PIN? Where is there a four digit pin? *
- ⦿ Click four random numbers and see what happens.
- ○ Go back out into the hallway. Maybe the mission control team has been released and know the PIN number.

6TH GRADE CONTENT 6.EE.A.2 6.EE.A.2A 6.EE.A.2C
DIGITAL ESCAPE ROOM!

The Great Classroom Escape
SIXTH GRADE MATH
Digital Escape Room Bundle

EASY TO IMPLEMENT

The Great Classroom Escape
Operation Restore Order

6.EE.A.1

TOP SECRET
NAME: Oxx, Key
KNOWN ALIAS: Chaos

WANTED FOR:

CONFIDENTIAL

$0\ 4\quad 9$
$7\ 8\ 2\ 0$
$3\ 9$

$3^2 + 9 \div 3 + 6 = 10$
$5^2 - 7 \div 3 + 6 = 12$
$4^2 \div 4 - 32 \div 2 - 4$

Order of Operations with Exponents
DIGITAL ESCAPE ROOM!

The Great Classroom Escape
NEGATIVE NUMBERS & ABSOLUTE VALUE
6TH GRADE MATH STANDARDS

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Does NOT require Google Classroom™ or e-mail addresses

ESCAPE ANTARCTICA 🐧
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