

POWERS OF 10

Solve & Draw

Powers of 10
Solve & Draw

Name: _____

Directions: Replace the underlined number with a power of 10 and add to the drawing.

1. $36 \times \underline{100,000}$

2. $55 \times \underline{1,000}$

3. $6.25 \times \underline{10,000}$

4. $3.14 \times \underline{100}$

5. $14.5 \times \underline{1,000}$

6. $45 \times \underline{10}$

8. $12 \times \underline{1,000}$

10^5	Draw a STOP sign in the stick figure's right hand.	10^4	Write "#5" on the side of the bus.
10^4	Draw a smile on the stick figure.	10^3	Write "#1" on the side of the bus.
10^4	Draw a bus driver in the bus window.	10^2	Draw two kids in the bus.
10^5	Draw a STOP sign on the side of the bus.	10^3	Draw three kids in the bus.
10^4	Draw a car on the road.	10^2	Draw a bicyclist on the road.
10^5	Draw a bus stop shelter.	10^3	Draw a car on the road.

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PREVIEW FILE

POWERS OF 10

Solve & Draw

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POWERS OF 10

Solve & Draw

Solve & Draw pages are an easy, no-prep way to powers of ten review work or practice more engaging. Inspired by students who felt color-by-number pages weren't creative enough, Solve & Draw resources allow the students to personalize the drawing with their own drawing style and colors.

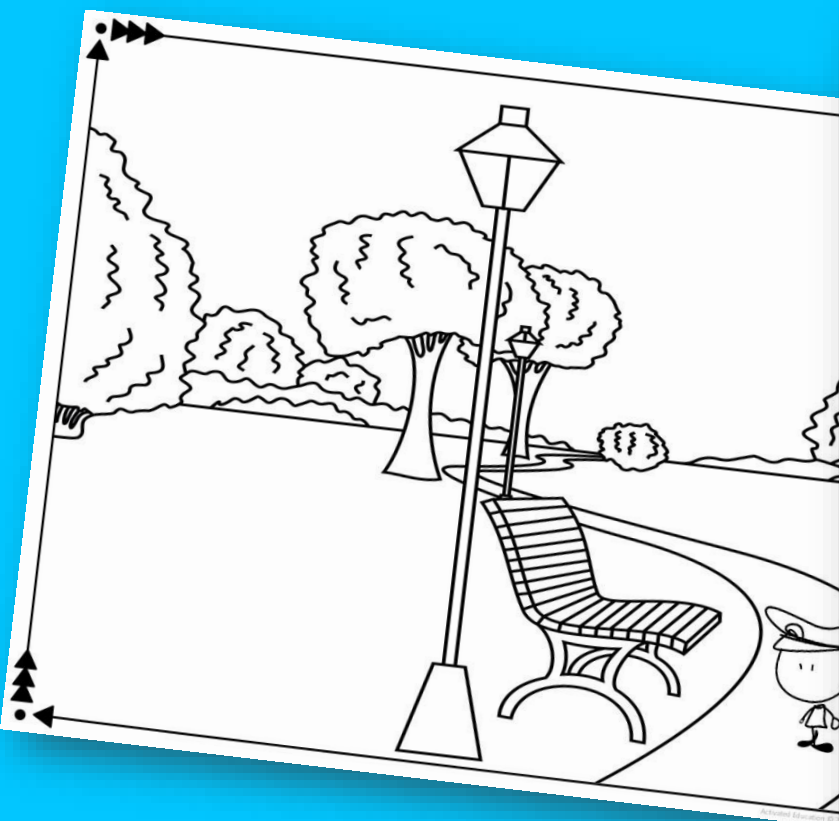
How Solve & Draw Resources Work

Students solve the powers of 10 problems and add to the drawing based on their answers. Drawing prompts specify the type of object that needs to be included but allows your student creativity in their style of drawing, level of detail, and colors used.

Print on two pages or print double-sided. These pages also work well when you want to end up with a fun final product for bulletin boards or other display. You may also project the drawing page onto your classroom board and have students come up to add to the drawing individually or as teams!

An optional challenge page is included, perfect for early finishers! This page gives students an extension opportunity by asking them to change a problem or to create a problem that fits one of the incorrect drawing prompts or to create a math equation and their own drawing prompts.





Name: _____

Powers of 10
Solve & Draw

Directions: Convert to exponential form and add to the drawing.

1. 1,000	2. 100,000
10^3 Draw a moustache on the stick figure.	10^6 Draw another stick figure playing guitar.
10^2 Draw a smile on the stick figure.	10^5 Draw a singing stick figure.
3. 1,000,000	4. 10,000
10^5 Draw ears on the original stick figure.	10^5 Draw flowers beside the bench.
10^6 Draw eyebrows on the original stick figure.	10^4 Draw a hot air balloon in the sky.
5. 100	6. 10
10^2 Draw another stick figure on the path.	10^0 Draw a bunny by a tree.
10^3 Draw a stick figure on the bench.	10^1 Draw another tree.
7. 10,000,000	8. 100,000,000
10^7 Draw two stick figures on the grass, playing ball.	10^9 Draw another lamp post.
10^8 Draw two stick figures on the grass having a picnic.	10^8 Draw a pond on the grass.

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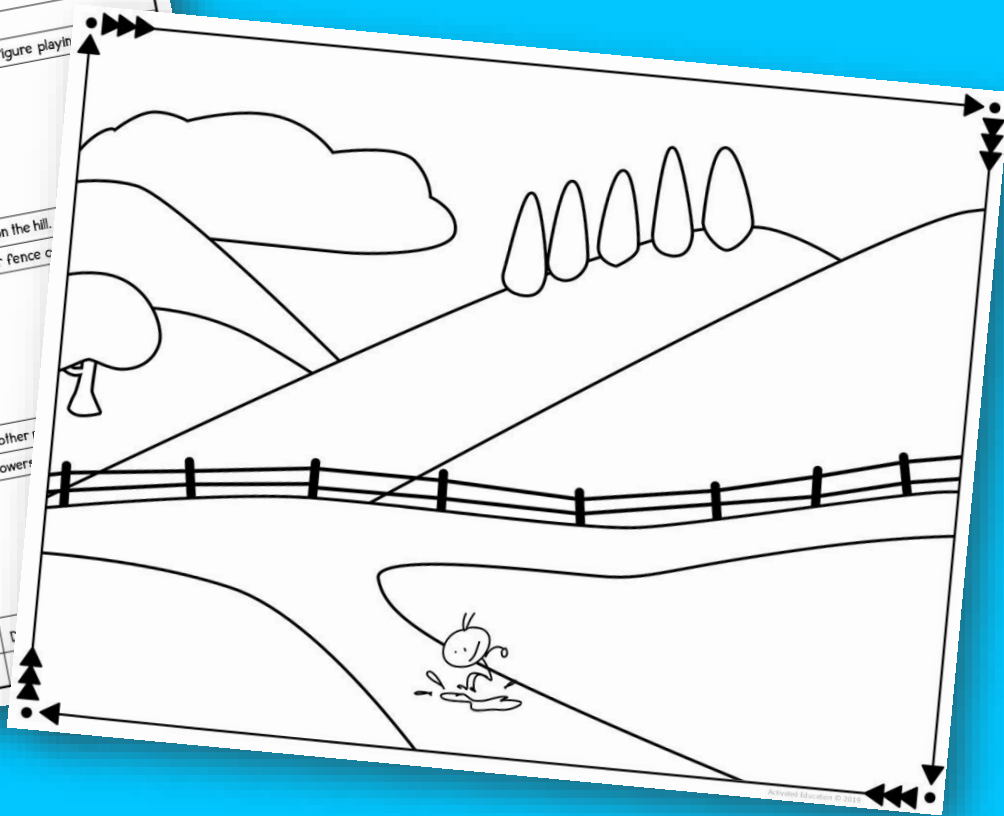
Name: _____

Powers of 10
Solve & Draw

Directions: Convert to exponent to standard form and add to the drawing.

1. 10^8	2. 10^3
100,000,000 Draw rain boots on the stick figure.	100 Make it rain.
10,000,000 Draw a rain hat on the stick figure.	1,000 Draw another stick figure playing
3. 10^5	4. 10^1
100,000 Draw 3 sheep in the field.	10 Draw a barn on the hill.
10,000 Draw 3 cows in the field.	100 Draw another fence
5. 10^4	6. 10^2
10,000 Draw one more tree.	1,000 Draw another
1,000 Draw two more trees.	100 Draw flowers
7. 10^7	8. 10^6
10,000,000 Draw a bird sitting on the fence.	10,000
1,000,000 Draw a cat walking on the fence.	1,000,000

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Powers of 10
Solve & Draw

Name: _____

Directions: Replace the underlined number with a power of 10 and add to the drawing.

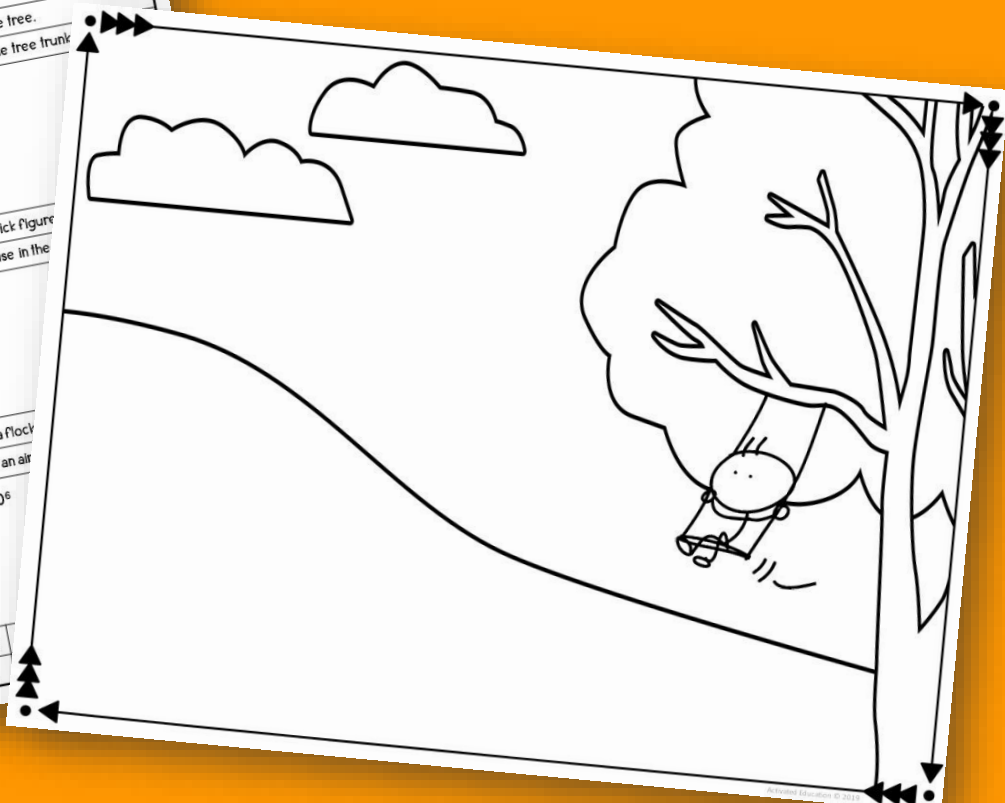
1. 36 x <u>100,000</u>	2. 55 x <u>1,000</u>
10 ⁵ Draw a STOP sign in the stick figure's right hand.	10 ⁴ Write "#5" on the side of the bus.
10 ⁴ Draw a smile on the stick figure.	10 ³ Write "#1" on the side of the bus.
3. 6.25 x <u>10,000</u>	4. 3.14 x <u>100</u>
10 ⁴ Draw a bus driver in the bus window.	10 ² Draw two kids in the bus windows.
10 ⁵ Draw a STOP sign on the side of the bus.	10 ³ Draw three kids in the bus windows.
5. 14.5 x <u>1,000</u>	6. 45 x <u>10</u>
10 ³ Draw a kid on the sidewalk.	10 ¹ Draw a car on the street.
10 ⁴ Draw a kid on the crosswalk.	10 ² Draw a bicyclist on the street.
7. 0.44 x <u>10,000</u>	8. 12 x <u>1,000</u>
10 ⁴ Draw two kids in the bus stop shelter.	10 ² Draw a school in the background.
10 ⁵ Draw three kids in the bus stop shelter.	10 ³ Draw two more clouds in the sky.

Powers of 10
Solve & Draw

Name: _____

Directions: Write the number in standard form and add to the drawing.

1. 2.5 x 10 ³	2. 8.63 x 10 ⁴
2,500 Draw a bird's nest in the tree.	86,300 Draw leaves on the tree.
25,000 Draw a bird sitting on a tree branch.	863,000 Draw a knot on the tree trunk.
3. 21.42 x 10 ⁵	4. 1.5 x 10 ²
21,420 Draw a dog sleeping by the tree.	150 Draw two stick figures.
214,200 Draw a dog running in the field.	150 Draw a house in the background.
5. 0.45 x 10 ⁶	6. 12.14 x 10 ¹
45,000 Draw one more tree.	1214 Draw a flock of birds.
450,000 Draw two more trees.	1214 Draw an air conditioner.
7. 52.01 x 10 ³	8. 0.28 x 10 ⁵
52,010 Draw another hill in the background.	28,000,000 Draw a car.
5,201,000 Draw another cloud in the sky.	280,000 Draw a house.





Name: _____

Powers of 10 Solve & Draw

Directions: Solve the problems and add to the drawing.

1. $6 \times 1,000$	2. 11.25×10^3
10^2 Draw one customer looking at the cupcakes.	11,250 Write "baker" on the baker's hat.
10^3 Draw two customers looking at the cupcakes.	112,500 Write "baker" on the baker's apron.
3. 100,000	4. 45×100
10^4 Draw a 2-layer cake in the window.	10^2 Draw donuts in the window.
10^5 Draw a 1-layer cake in the window.	10^3 Draw pies in the window.
5. 1,000,000	6. $10,000 \times 920$
10^6 Draw a lady in front of the baker.	10^3 Draw a rug with a cupcake on it.
10^5 Draw a man in front of the baker.	10^4 Draw a rug with a cake on it.
7. 0.75×10^5	8. $10^2 \times 807$
75,000 Draw someone who is sweeping.	8,700 Draw a "SALE" sign on a shelf.
750,000 Draw a customer eating a cupcake.	80,700 Draw a mother with a baby.

Name: _____

Challenge Page

Challenge #1:
Choose a drawing prompts from the page. Write a new problem that makes the incorrect answer choice correct.

Example:

Original Problem	Drawing Prompts	Correct Problem
1. 1,000	10^3 Draw a moustache on the stick figure. 10^2 Draw a smile on the stick figure.	100

Challenge #1 Workspace:

Challenge #2:
You create a new powers of ten problem and write two new drawing prompts. Add the correct drawing to your own page.

New Problem	Drawing Prompts

Name: **ANSWER KEY**

Powers of 10 Solve & Draw

Directions: Convert to exponential form and add to the drawing.

1. 1,000	2. 100,000
10^3 Draw a moustache on the stick figure.	10^6 Draw another stick figure playing guitar.
10^2 Draw a smile on the stick figure.	10^5 Draw a singing stick figure.
3. 1,000,000	4. 10,000
10^5 Draw ears on the original stick figure.	10^4 Draw flowers beside the bench.
10^6 Draw eyebrows on the original stick figure.	10^3 Draw a hot air balloon in the sky.
5. 100	6. 10
10^2 Draw another stick figure on the path.	10^0 Draw a bunny by a tree.
10^3 Draw a stick figure on the bench.	10^1 Draw another tree.
7. 10,000,000	8. 100,000,000
10^7 Draw two stick figures on the grass, playing ball.	10^8 Draw another lamp post.
10^8 Draw two stick figures on the grass having a picnic.	10^9 Draw a pond on the grass.

EXPONENTS

Solve & Draw

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EXPONENTS

Solve & Draw

Solve & Draw pages are an easy, no-prep way to make exponent review work or practice more engaging. Fully grasping exponents takes repeated practice and often students need a quick review throughout middle school to remember with accuracy!

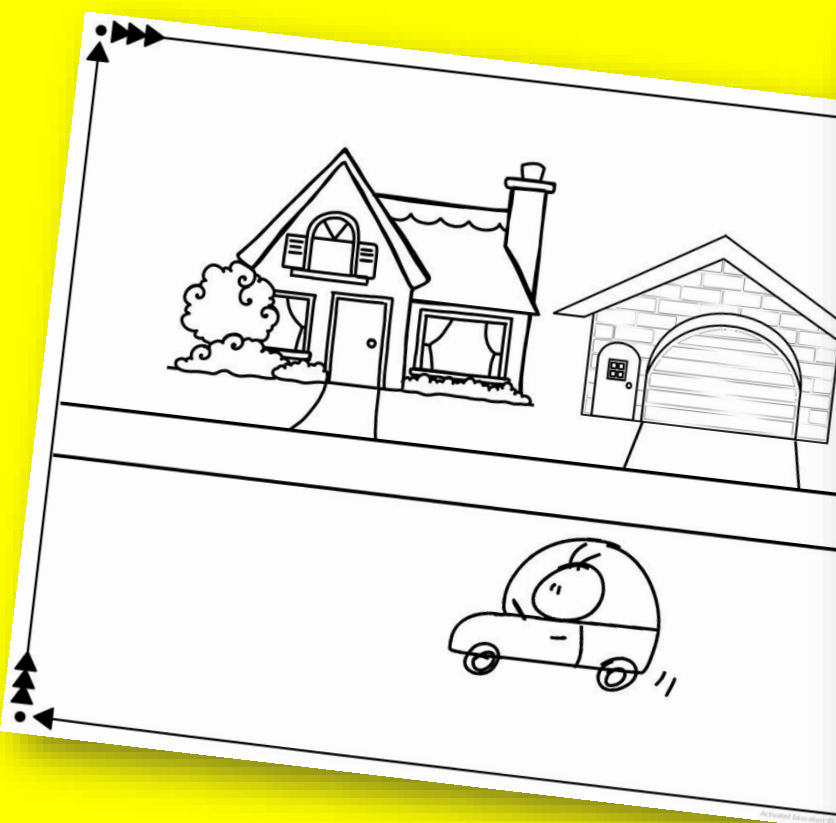
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Exponents Solve & Draw

Name: _____

 Directions: Identify the base or the exponent and add to the drawing.

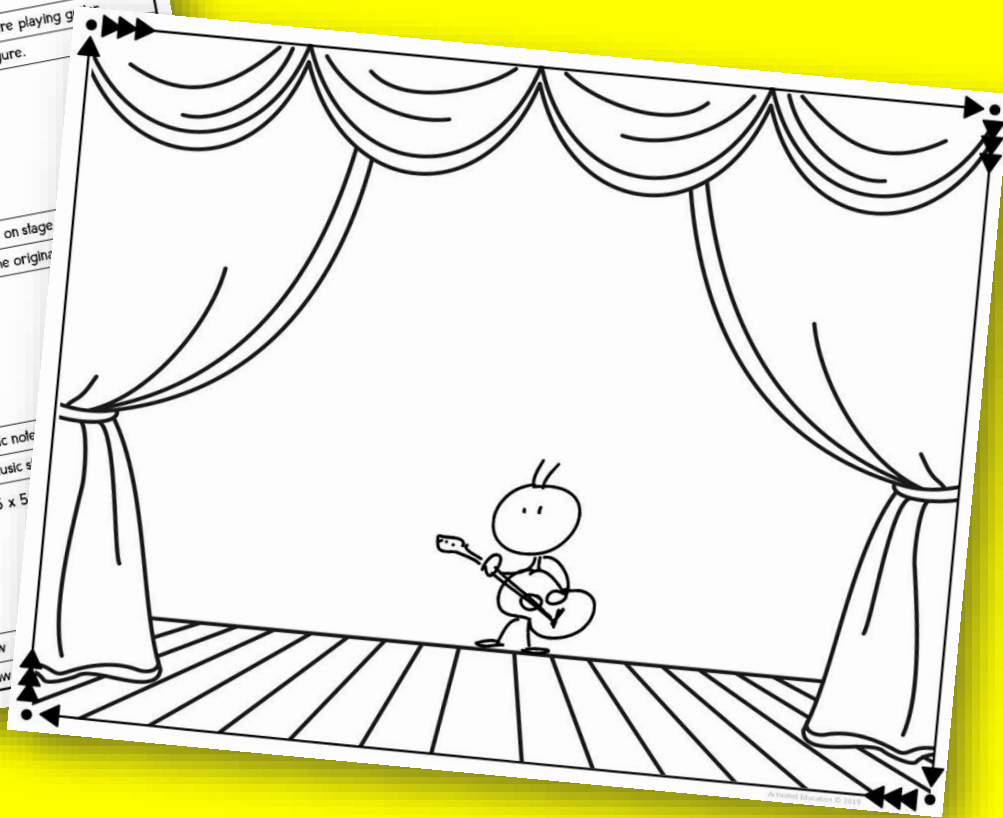
1. What is the base of 3^4 ?	2. What is the exponent of 2^3 ?
3. Draw a puppy in the backseat of the car.	2. Draw a puppy sitting on the sidewalk.
4. Draw a kid in the backseat of the car.	3. Draw a puppy running on the sidewalk.
3. What is the exponent of 7^2 ?	4. What is the base of 5^2 ?
7. Draw a fence in front of the house.	5. Draw a skateboard by the garage.
2. Draw another car.	2. Draw a bike by the garage.
5. What is the base of 3^5 ?	6. What is the exponent of 2^4 ?
3. Draw a rainbow in the sky.	2. Draw one cloud in the sky.
5. Draw the sun in the sky.	4. Draw two clouds in the sky.
7. What is the exponent of 8^3 ?	8. What is the base of 4^5 ?
8. Draw flowers on the bushes.	4. Draw a mailbox in front of the house.
3. Draw a tree beside the garage.	5. Draw a bird on each roof.

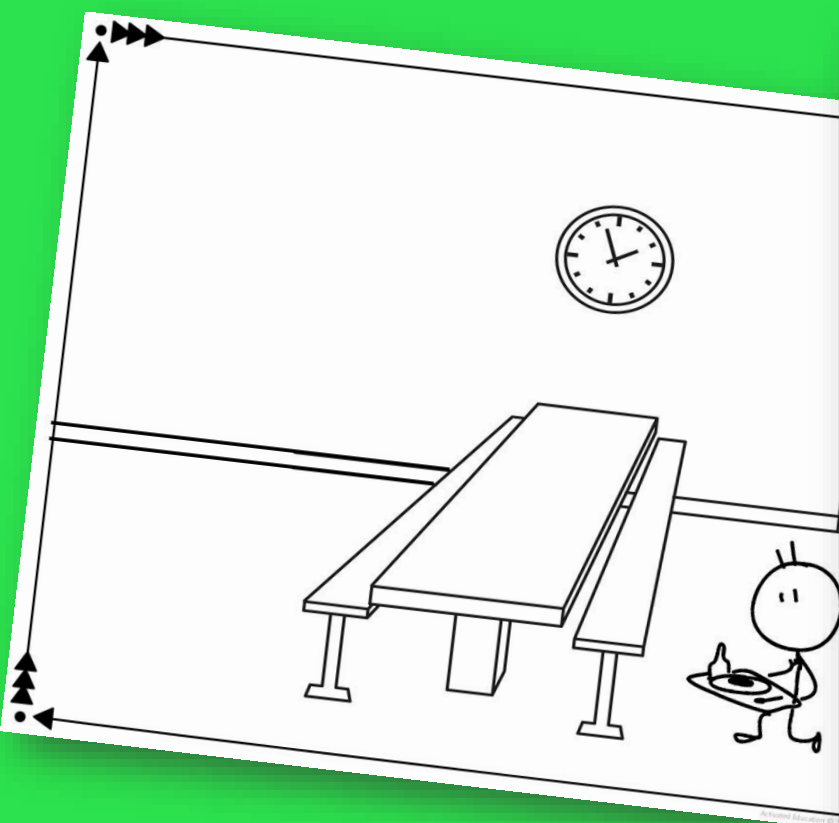
Exponents Solve & Draw

Name: _____

 Directions: Write the expression using exponents and add to the drawing.

1. $6 \times 6 \times 6 \times 6$	2. $9 \times 9 \times 9$
6 ⁴ Draw a bow tie on the stick figure.	3 ³ Draw another stick figure playing guitar.
4 ⁶ Draw a hat on the stick figure.	9 ³ Draw a singing stick figure.
3. 3×3	4. $2 \times 2 \times 2 \times 2 \times 2$
3 ² Draw a smile on the original stick figure.	5 ² Draw a drummer on stage.
2 ³ Draw another hair on the original stick figure.	2 ⁵ Draw a mic by the original stick figure.
5. $8 \times 8 \times 8$	6. $4 \times 4 \times 4 \times 4$
8 ³ Draw an "Open Mic Night" sign above the stage.	4 ⁴ Draw music notes.
3 ⁸ Draw a "Talent Show" sign above the stage.	4 ³ Draw a music stand.
7. 9×9	8. $5 \times 5 \times 5 \times 5$
9 ² Draw a star hanging from the ceiling.	5 ⁶ Draw a star hanging from the ceiling.
2 ⁹ Draw two stars hanging from the ceiling.	6 ⁵ Draw a star hanging from the ceiling.





Exponents Solve & Draw Name: _____

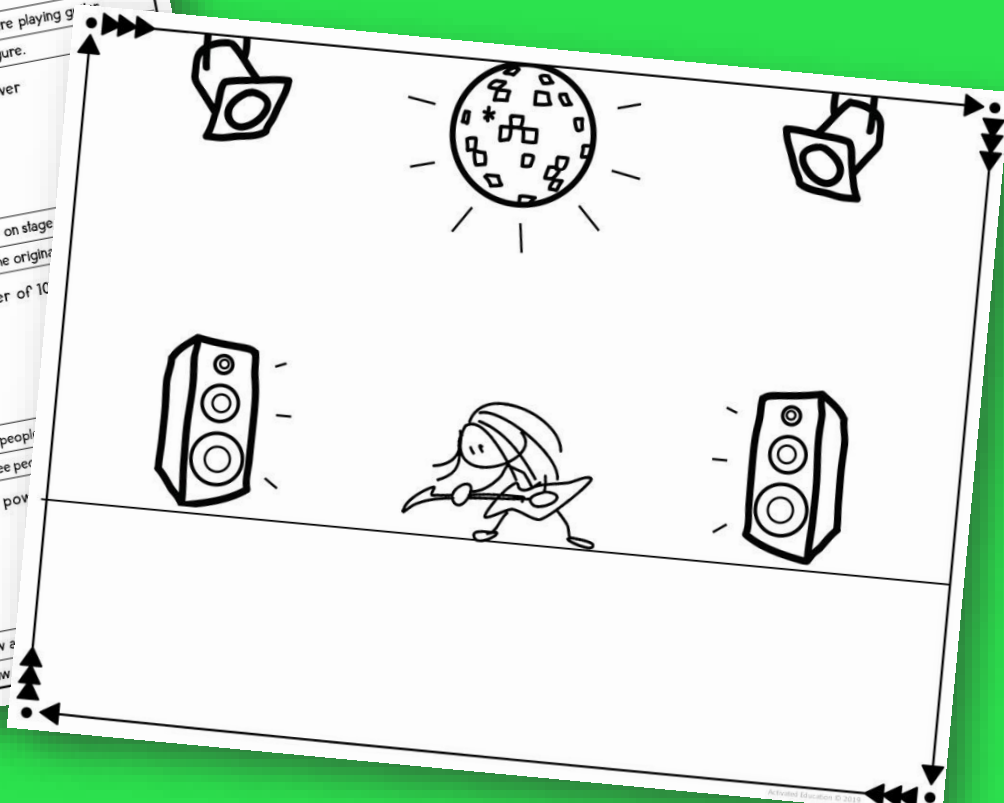
Directions: Write the expanded form and add to the drawing.

1. Write the expanded form of 6^3 .		2. Write the expanded form of 3^5 .	
$6 \times 6 \times 6$	Draw a backpack on the stick figure.	3×5	Draw a stick figure sitting at the table.
6×3	Draw shoes on the stick figure.	$3 \times 3 \times 3 \times 3$	Draw two stick figures at the table.
3. Write the expanded form of 2^4 .		4. Write the expanded form of 1^2 .	
2×4	Draw a smile on the original stick figure.	1×1	Draw a tray on the table.
$2 \times 2 \times 2 \times 2$	Draw another hair on the original stick figure.	1×2	Draw a napkin dispenser on the table.
5. Write the expanded form of 3^3 .		6. Write the expanded form of 5^4 .	
3×3	Draw another table.	$5 \times 5 \times 5 \times 5$	Draw a "Spirit Week" poster on the wall.
$3 \times 3 \times 3$	Draw a teacher standing by the door.	5×4	Draw a "Sign up for Sports" poster on the wall.
7. Write the expanded form of 10^3 .		8. Write the expanded form of 4^6 .	
$10 \times 10 \times 10$	Draw a garbage can by the wall.	4×6	Draw a Menu board on the wall.
10×3	Draw a recycle bin by the wall.	$4 \times 4 \times 4 \times 4 \times 4 \times 4$	Draw a bell on the wall.

Exponents Solve & Draw Name: _____

Directions: Convert to exponential form and add to the drawing.

1. 7 cubed		2. 9 squared	
7^2	Draw a hat on the stick figure.	9^2	Draw another stick figure playing guitar.
7^3	Draw more hair on the stick figure.	9^3	Draw a singing stick figure.
3. 3 to the power of 10		4. 2 to the fourth power	
3^{10}	Draw a smile on the original stick figure.	4^2	Draw a drummer on stage.
10^3	Draw eyebrows on the original stick figure.	2^4	Draw a mic by the original stick figure.
5. 8 cubed		6. 4 to the power of 10	
8^3	Draw another speaker.	10^4	Draw two people.
3^8	Draw another disco ball.	4^{10}	Draw three people.
7. 9 to the second power		8. 5 to the power of 10	
9^2	Draw a star hanging from the ceiling.	7^5	Draw a star.
2^9	Draw two stars hanging from the ceiling.	5^7	Draw a star.





Name: _____

Exponents Solve & Draw

Directions: Calculate the value of the exponent and add to the drawing.

1. 4^2	2. 9^3
16 Draw sesame seeds on one of the burgers.	27 Draw a "Burger Shack" sign on the wall.
8 Draw sesame seeds on all the burgers.	243 Draw an "OPEN" sign on the wall.
3. 2^5	4. 5^4
32 Draw another cup on the table.	20 Draw a stick figure sitting in the booth.
10 Draw another tray on the table.	625 Draw a napkin dispenser on the table.
5. 6^2	6. 3^3
12 Draw a stick figure in line by the register.	27 Draw a window on the wall.
36 Draw a stick figure working behind the counter.	9 Draw another register on the counter.
7. 7^5	8. 4^3
16,807 Draw fries on all the trays.	7 Draw a to go bag on the counter.
1 Draw a cup of soda on the counter.	64 Draw a cup of soda on the counter.

Name: _____

Challenge Page

Challenge #1:
Choose a drawing prompts from the page. Write a new problem that makes the incorrect answer choice correct.

Original Problem	Drawing Prompts	Correct Problem
1. What is the base of 3^4 ?	3 Draw a puppy in the backseat of the car. 4 Draw a kid in the backseat of the car.	4^2
Challenge #1 Workspace: 		
Challenge #2: You create a new exponent problem and write two new drawing prompts. Add the correct drawing to your own page.		
New Problem	Drawing Prompts	

Name: _____

Exponents Solve & Draw

ANSWER KEY

Directions: Identify the base or the exponent and add to the drawing.

1. What is the base of 3^4 ?	2. What is the exponent of 2^3 ?
3 Draw a puppy in the backseat of the car.	2 Draw a puppy sitting on the sidewalk.
4 Draw a kid in the backseat of the car.	3 Draw a puppy running on the sidewalk.
3. What is the exponent of 7^2 ?	4. What is the base of 5^2 ?
7 Draw a fence in front of the house.	5 Draw a skateboard by the garage.
2 Draw another car.	2 Draw a bike by the garage.
5. What is the base of 3^5 ?	6. What is the exponent of 2^4 ?
3 Draw a rainbow in the sky.	2 Draw one cloud in the sky.
5 Draw the sun in the sky.	4 Draw two clouds in the sky.
7. What is the exponent of 8^3 ?	8. What is the base of 4^5 ?
8 Draw flowers on the bushes.	4 Draw a mailbox in front of the house.
3 Draw a tree beside the garage.	5 Draw a bird on each roof.

Thank you for previewing!

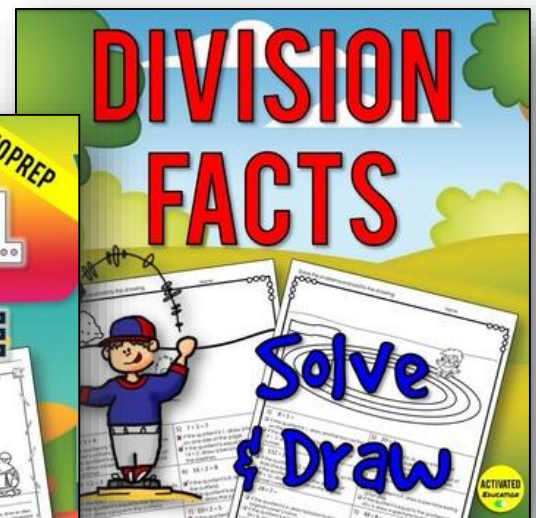
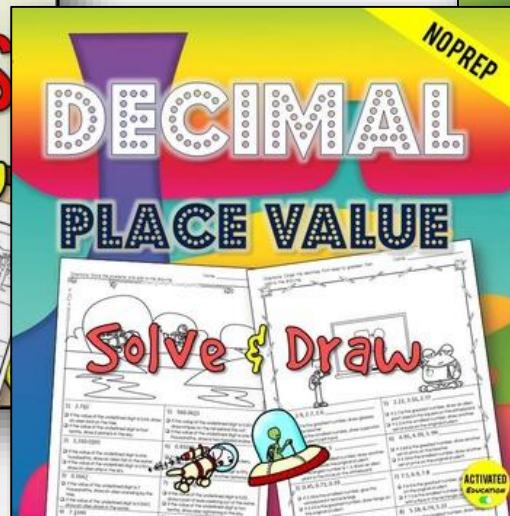
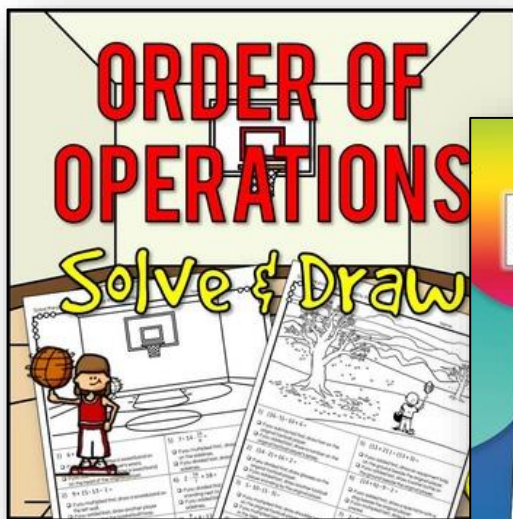
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