

4th
Grade

Math Spiral Review

Puzzle-a-Day Escape Room Tasks

February/Winter Math Review Challenges

24 Escape Room
Style Tasks

Print or Digital

Fun Math Puzzles



Copper Kettle Training Task 9: Wrapper's Delight

Fudge Fizzlers can't end up in Cocoa Coil wrappers, so each candy has a unique password that sends it through the conveyor belts to the correct packaging station. Start at START, solve each division problem, and follow the path labeled with the correct answer. The pigpen symbols along the route will reveal the Fudge Fizzlers' password.

START

1,248 ÷ 6 208 4,008 ÷ 8 511 1,740 ÷ 5 348 3,072 ÷ 8 384 2,484 ÷ 6

28 380 501 648 674 440 44 404 414

3,248 ÷ 7 486 2,052 ÷ 3 684 3,984 ÷ 6 664 3,636 ÷ 9 444 1,860 ÷ 5

1. 1. 1. 1. 1. 1. 1. 1. 1.

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

Copper Kettle Training Task 10: Making the Cut

Sugar Spires are grown slowly in the Crystal Room, and every batch is inspected for quality before packaging. The line plot shows the lengths of a sample of Sugar Spires in inches. Use the data to complete the quality-control check. Use the solutions to learn whether this batch is good to go!

Batch Result Key

Length of Sugar Spire	Hold	Check	Wait	Recount
1/2 inch	Hold	4 inches	Store	
3/4 inch	Check	4 1/2 inches	Label	
1 inch	Wait	To 16 inches	Pack	
1 1/4 inches				17

Length of Sugar Spire in inches

1 1 1/8 1 1/4 1 3/8 1 1/2 1 5/8 1 3/4 1 7/8

What is the difference in length between the longest and shortest Sugar Spires in the sample?

What is the length of all of the Sugar Spires that measure 1 1/4 inches?

How many Sugar Spires are 1 1/2 inches or longer?

Batch Result: _____

Copper Kettle Training Task 5: Quite a Stretch

The taffy puller keeps a lifetime count of every foot of taffy it stretches. One machine is broken. Use the place-value clues to identify its counter reading and find the correct clues.

Clues

- The taffy puller that needs repairs has pulled a number of feet of taffy that rounds to 50,000 when rounded to the nearest 10 thousand.
- The taffy puller that has pulled the most taffy is not the one that needs repairs.
- The taffy pullers with a digit 8 that is worth 10 times as much as the digit 8 in thirty-three thousand, eight hundred fifty are in good shape.
- After rounding to the nearest hundred, the digit in the hundreds place is not 2, 5, or 8 in the taffy puller you are looking for.

Circle the Taffy Puller!

Drag and drop the x's circle

A detailed illustration of a vintage-style taffy puller machine. It features a large central container filled with pink taffy, several smaller containers with different colored taffies (blue, orange, purple, green), and multiple mechanical counters and dials. A green circle highlights one of the counters.

Suggested Uses

- Morning work
- Centers
- Exit tickets
- Task cards
- Enrichment
- Test Prep



Fast Facts

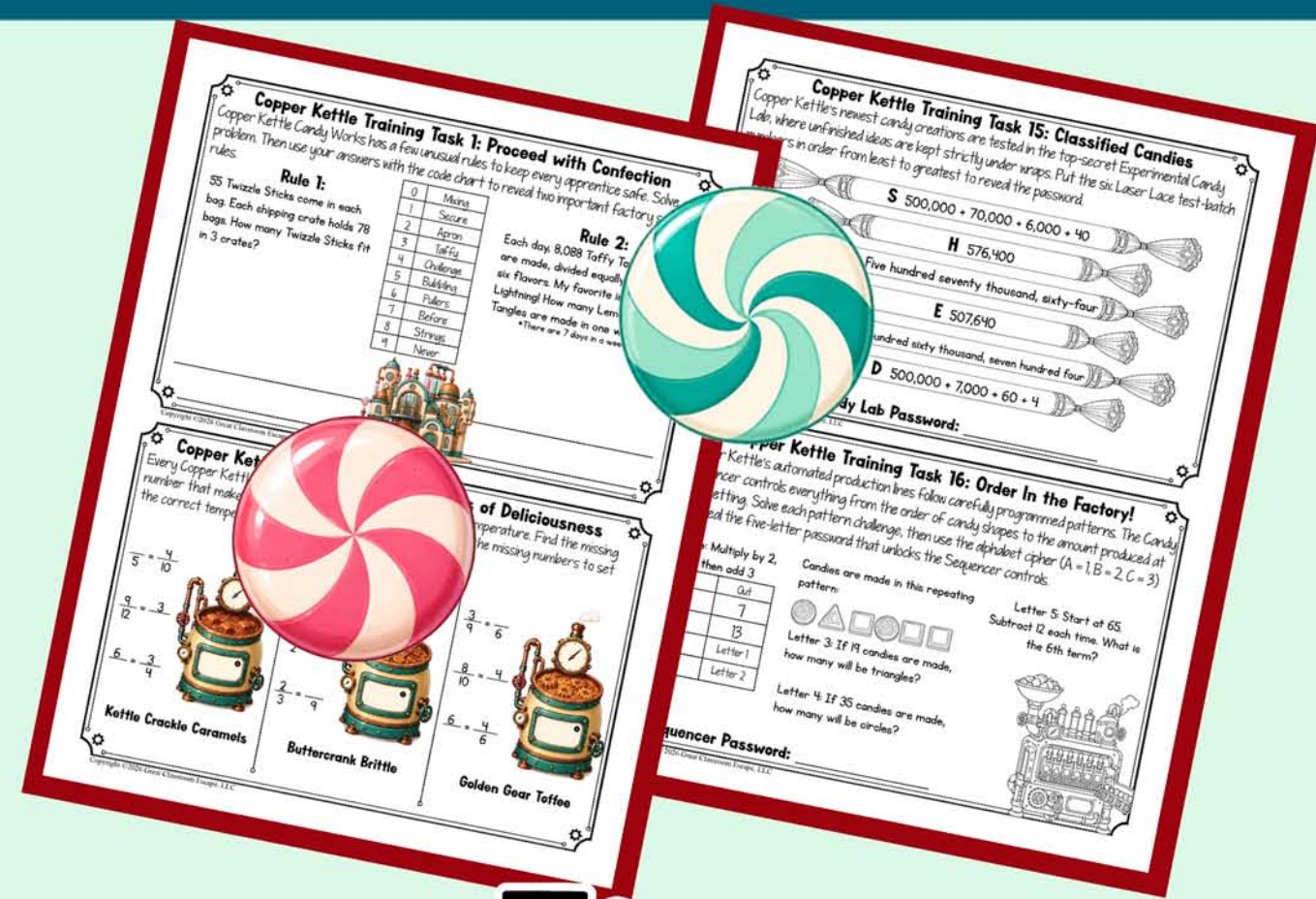
- ✂ Low prep! Print & go, or click & go digital
- 🕒 Escape Time ~5-15 minutes per task
- 👤 Use individually, in pairs, or groups
- 💻 Digital version requires Google[™] accounts
- ✓ Not self-checking, not editable
- 💻 Use in-person or virtually
- 🧩 24 puzzles included - 20 standard + 4 challenge

Spiral Math Review

***If a skill hasn't been taught yet, save that task for later in the year!**

What is Included?

- 20 half page escape room puzzles/task cards
- 4 full page "Expert" tasks
 - Black and white version
 - Color version
 - Google Slides™ Version *could be saved as PPT
- Recording page (optional)
- Back story page
- Quick view of standards/skills covered
- Detailed answer key
- Challenging, standards-based math review puzzles
- *This activity is NOT editable



Tips

- Print a full packet for the month of all 24 tasks OR cut pages in half and distribute one puzzle per day
- Laminate for durability to use in centers
- Allow productive struggle!

Puzzle Preview

Candy Factory Theme

24 total puzzles

Color or Black & White
+ Google Slides™

Copper Kettle Training Task 5: Quite a Stretch

Each taffy puller keeps a lifetime count of every foot of taffy it stretches. One machine is due for repairs. Use the place-value clues to identify its counter reading and find the correct machine.

Clues

The taffy puller that needs repairs has pulled a number of feet of taffy that rounds to 50,000 when rounded to the nearest 10 thousand.

The taffy puller that has pulled the most taffy is not the one that needs repairs.

The taffy pullers with a digit 8 that is worth 10 times as much as the digit 8 in thirty-three thousand, eight hundred fifty are in good shape.

AF hu

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Copper Kettle Training Task 6: The Secret Recipe Safe

The Secret Recipe Safe guards every Copper Kettle delicious. For an ordinary filing cabinet. Solve each problem. Then use your answers with the code chart to reveal the passphrase that opens the safe.

Cloud Nougat must cure for precisely 23 hours and 4 minutes. How many minutes is that?

204 cups of White Syrup were prepared. How many ounces are left?

1 hour = 60 minutes

1 cup = 8 fluid ounces

Equation and Solution

Word

Equation and Solution

Word

Recipe S

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Copper Kettle Training Task 1: Proceed with Confection

Copper Kettle Candy Works has a few unusual rules to keep every apprentice safe. Solve each problem. Then use your answers with the code chart to reveal two important factory safety rules.

Rule 1:

55 Twizzle Sticks come in each bag. Each shipping crate holds 78 bags. How many Twizzle Sticks fit in 3 crates?

Rule 2:

Each day, 8,088 Taffy Tangles are made, divided equally among six flavors. My favorite is Lemon Lightning! How many Lemon Lightning Tangles are made in one week?

*There are 7 days in a week

0 Mixing
1 Secure
2 Apron
3 Taffy
4 Challenge
5 Building
6 Pullers
7 Before
8 Strings
9 Never

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Copper Kettle Training Task 1: Proceed with Confection

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Copper Kettle Training Task 2: Degrees of Deliciousness

Every Copper Kettle candy must be cooked at just the right temperature. Find the missing number that makes each pair of fractions equivalent. Then use the missing numbers to set the correct temperature for each candy.

$\frac{4}{10} = \frac{3}{10}$

$\frac{1}{4} = \frac{12}{48}$

$\frac{3}{9} = \frac{6}{6}$

$\frac{2}{2} = \frac{4}{8}$

$\frac{8}{10} = \frac{4}{5}$

$\frac{2}{3} = \frac{4}{6}$

$\frac{6}{6} = \frac{4}{4}$

Crackle Caramels

Buttercrank Brittle

Golden Gear Toffee

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Copper Kettle Training Task 9: Wrapper's Delight

Fudge Fizzlers can't end up in Cocoa Col wrappers, so each candy has a unique password that sends it through the conveyor belts to the correct packaging station. Start at START, solve each division problem, and follow the path labeled with the correct answer. The pippen symbols along the route will reveal the Fudge Fizzlers' password.

START

1248 ÷ 6 = 208

1,008 ÷ 8 = 126

511 ÷ 1,740 ÷ 5 = 294

3,072 ÷ 8 = 384

2,484 ÷ 6 = 414

28 ÷ 380 = 0.07368

501 ÷ 674 = 0.74347

674 ÷ 440 = 1.53182

3,984 ÷ 6 = 664

3,636 ÷ 9 = 404

1,860 ÷ 5 = 372

3,248 ÷ 7 = 464

2,052 ÷ 3 = 684

3,984 ÷ 6 = 664

3,636 ÷ 9 = 404

1,860 ÷ 5 = 372

464 ÷ 386 = 1.19948

724 ÷ 30 = 24.13333

604 ÷ 465 = 1.30107

444 ÷ 444 = 1

2,84 ÷ 7 = 406

2,82 ÷ 6 = 47

352 ÷ 332 = 1.06024

2,324 ÷ 7 = 332

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Copper Kettle Training Task 8: Sugar Spikes

Sugar Spikes are grown slowly in the Crystal Room, and their packaging. The line plot shows the lengths of a sample of Sugar Spikes. Use the solutions to complete the quality-control check.

Length of Sugar Spikes in inches

1 1 1/8 1 1/4 1 3/8 1 1/2 1 5/8 1 3/4 1 7/8 2

What is the difference in length between the longest and shortest Sugar Spikes?

What is the total length of all of the Sugar Spikes that are 1 1/2 inches or longer?

How many Sugar Spikes are 1 1/2 inches or longer?

Batch Result:

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Copper Kettle Training Task 7: Recipe for Success

Creative candymakers can leave quite a mess, and pieces of recipes sometimes get mixed up. The Recipe Rebuilder can put everything back in order, but first you need its password. Match each candy code to its equivalent ingredients code and instructions code. Then use the letters to reveal the four-word passphrase. Example: 2 3/8 = 3/8 + 3/8 = 3/4

Candy Code (mixed number)	Ingredients Code (decomposed fraction)	Instructions Code (improper fraction)
Berry Bolt Gummies Y 3 1/4		
Lemon Gear Drops G 3 1/2		
Maple Snap Bites T 3 1/4		
Honeywheel Chews M 3 1/2		

E 5/8 + 5/8 = 5/4

I 3/4 + 3/4 = 3/2

Recipe Rebuilder Passphrase:

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Copper Kettle Training Task 10: The Rarest Ingredients

The rarest Copper Kettle ingredients are from spills, mix-ups, and overly curious apprentices. Find the combination that matches the clues.

The 64 bottles of Moonberry Syrup in the milliliters are used for Star Chews, the rest Drops. How many milliliters go in each batch?

The small jar of Golden Vanilla Flakes has many. Each batch of Velvet Crown Toffee uses the flakes from both jars?

The pantry holds 38 tins of Ruby Sugar Crystals. 1,684 are reserved for Crimson Candy special candies?

Combination

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Copper Kettle Training Task 3: Sort of a Big Deal

Copper Kettle's Candy Classifier can sort hundreds of sweets at once, provided you know the correct code to turn it on. Shade the correct numbers in each panel to reveal the code.

Factors of 84

12	4	7
1	9	14
3	42	2
8	16	28
24	18	6

Multiples of 7

70	42	28
47	1	63
56	21	7
34	67	49
14	77	35

Composite Numbers

49	57	51
53	41	21
19	2	9
23	11	77
67	29	63

Code:

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Copper Kettle Training Task 4: Don't S

Copper Kettle recipes are very precise. Too much sugar, and the spoon. Too little sugar, and your Bubbleberry may be a clue to match each candy recipe with the correct amount.

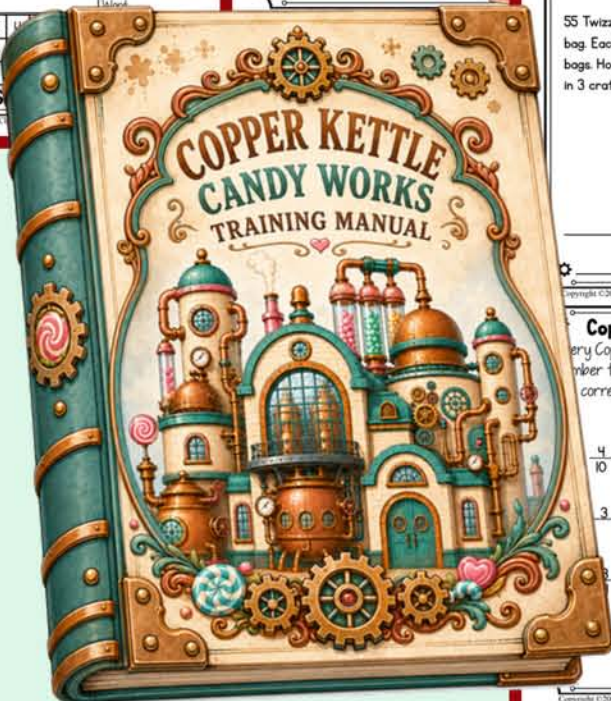
Use the clues to complete the grid. Put an X where a sugar amount does not match and an O where it does.

Cups of sugar

	1/3	1/2	2/3	4/6	4/3
Raspberry Ribbon					
Mint Meltaway					
Golden Caramel					
Cocoa Crunch					
Bubbleberry					

Mint less
Raspberry
sugar
Mint M
Bubbleb
Cocoa
Caramel

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Puzzle Preview

20 standard single
puzzle escape room
style challenges + 4
challenging bonus
puzzles

Copper Kettle Training Task 15: Classified Candies
Copper Kettle's newest candy creations are tested in the top-secret Experimental Candy Lab, where unfinished ideas are kept strictly under wraps. Put the six Laser Lace test-batch numbers in order from least to greatest to reveal the password.

S 500,000 + 70,000 + 6,000 + 40
H 576,400
I Five hundred seventy thousand, sixty-four
E 507,640
L Five hundred sixty thousand
D 500,000 + 70,000 + 6,000 + 40

Experimental Candy Lab Password:

Copper Kettle Training Task 16: Sequencer
Copper Kettle's automated production lines follow a Sequencer that controls everything from the order of each setting. Solve each pattern challenge, then use the results to reveal the five-letter password that unlocks the Sequencer.

Rule: Multiply by 2, then add 3

In	Out
2	7
5	13
0	Letter 1
11	Letter 2

Candies are made in this pattern:

Letter 3: If 19 candies are made, how many will be triangles?

Letter 4: If 35 candies are made, how many will be circles?

Sequencer Password:

Copper Kettle Training Task 11: Testing, Testing...Tasting
Taste testing may sound like the easiest apprentice duty, but Copper Kettle takes its samples very seriously. Solve each problem, then use the alphabet cipher (A = 1, B = 2, C = 3...) to reveal the password for the Sample Station.

A tray of 9 Fudge Fizzlers was too fizzy and thrown out. Another tray held 4 times as many. The tester devoured 16 from that tray. How many were left?

Two trays of Mint Bites were set out for inspection. One held 7 candies, and the other held 3 times as many. If 27 Mint Bites failed inspection, how many passed?

There are 95 Chocolate Buttons in a full batch. That is 5 times the number needed for inspection. How many are needed for inspection?

A small dish holds 4 Cocoa Drops. A large dish holds 3 times as many. How many Cocoa Drops are needed for 2 small dishes and 1 large dish?

675 Berry Bolts were divided equally among 9 trays. Each tray held 3 times the number needed for testing. How many Berry Bolts were needed for testing?

Sample Station Password:

Copper Kettle Training Task 12: De-Sticking Machine
Sugar, syrup, and caramel have an impressive De-Sticking Machine can handle even the toughest candy. Use the clues below to reveal the password.

1 = 1
2 = 2

Let this be your letter:

L T C E B A U
0 1/4 1/2 3/4 1 1 1/4 1 1/2

De-Sticking Machine Password:

Copper Kettle Training Task 13: Full Flavor Ahead
The Flavor Fusion Machine can mix an entire batch of candy at the push of a button, but it refuses to stir a single spoonful without the correct six-digit start code. Use the clues to find the code. I suggest putting on your safety goggles before starting the machine.

Flavor Fusion Machine Start Code:

- No digit repeats in the code
- The digit 4 in the number is worth 10 times as much as the digit 4 in 503,498
- Rounds to 700,000 to the nearest hundred thousand
- Rounds to 650,000 to the nearest ten thousand
- The hundreds digit is 3 less than the ten-thousands digit
- Rounds up when rounded to the nearest hundred
- Rounds up when rounded to the nearest ten
- The last two digits form a multiple of 7

Copper Kettle Training Task 14: No Cutting Corners
Copper Kettle candies come in all shapes and sizes, so the Shaping Station hides its passphrase in shapes. You can't cut corners here, but you can count them. Decode the numbers, solve the problems, and use your answers to reveal the passphrase. • Tips: The pippen cipher will help you out: L T C E B A U

Shaping Station Passphrase:

Copper Kettle Certified Confectioner Task 3: Code of Conduct
Certified confectioners are trusted with more than individual machines. Copper Kettle's Master Control Panel connects some of the factory's most important equipment, and each tool symbol has a hidden value between 1 and 9,999. Use the equations to determine the values, then solve the final expression to reveal the Four-digit Master Code.

$\text{Whisk} \times \text{Spoon} = 64$ $\text{Spoon} + \text{Whisk} = 4$ $\text{Spoon} + \text{Whisk} = \text{Whisk}$

$\text{Spoon} \times \text{Spoon} = \text{Whisk}$ $\text{Whisk} + \text{Whisk} = \text{Spoon}$ $\text{Whisk} \times \text{Whisk} = \text{Spoon}$

$\text{Whisk} = \text{Spoon} = \text{Whisk} = \text{CODE}$

Copper Kettle Certified Confectioner Task 4: The Oldest Counters
One responsibility of a certified confectioner is to keep the oldest counters at Copper Kettle. The oldest counters at Copper Kettle are wondering how many Berry Bolts they need to disappear. It's best to get some practice now.

Copper Kettle Certified Confectioner Task 5: Survey Says...
Congratulations, certified confectioner! With apprentice training behind you, it's time to help create Copper Kettle's next great candy. Sort out the product-development survey results by matching each number of votes with its Flavor and texture.

Clues
A prime number of people chose the fizzy candy, but the fizzy candy was not tart.
The number of votes the spicy candy received has exactly 9 factors.
The vote totals for the chewy and crispy candies both have 3 and 7 as factors.

	Chewy	Crunchy	Fizzy	Creamy	Crispy	Sweet	Tart	Soft	Salty	Minty	Spicy
36											
42											
63											
91											
97											
Sweet											
Tart											
Salty											
Minty											
Spicy											

Copper Kettle Certified Confectioner Task 6: The Chill Chamber
Experimental candies need somewhere to chill. The Chill Chamber requires a combination of square inches to hold the key. You'll need to use the Atbash Cipher. After all, experience is the best ingredient.

2 yards

5 feet 8 inches

3 feet 7 inches

Copper Kettle Certified Confectioner Task 7: The Chill Chamber
Experimental candies need somewhere to chill. The Chill Chamber requires a combination of square inches to hold the key. You'll need to use the Atbash Cipher. After all, experience is the best ingredient.

2 yards

5 feet 8 inches

3 feet 7 inches

Copper Kettle Training Task 17: Raising the Bar
Kettle Melt Bars are poured into rectangular molds that each have an area of exactly 40 cm². A 1 cm by 40 cm bar would be much too long. Find the other three possible pairs of whole-number dimensions (think of the factor pairs of 40). Sketch each bar and find its perimeter. Put the perimeters in order from least to greatest to find the combination to the master mold cabinet.

Combination: - -

Copper Kettle Training Task 18: No Candy Left Behind
At Copper Kettle, even the odds and ends have a proper place, mostly because leaving stray candy around tends to attract taste testers. Solve the three problems and use the answers to open the Odds & Ends Locker.

391 Fizzwheel Drops are packed equally into 7 boxes. The leftovers go to quality control for taste testing. How many candies are taste-tested?

Copper Kettle has 391 Sunbeam Sugar Flakes. Each batch of Caramel Cloud Truffles uses 7 flakes. How many complete batches can be made?

Combination: - -



Logic puzzles
Deductive reasoning
Ciphers, codes & more

Math Standards Included

- Puzzle 1: 4.NBT.B.5-6, 4.OA.A.3 Multi-step word word problems
- Puzzle 2: 4.NF.A.1 Equivalent Fractions
- Puzzle 3: 4.OA.B.4 Factors, multiples, prime/composite
- Puzzle 4: 4.NF.A.2, 4.NF.A.1 Compare fractions, equivalent fractions
- Puzzle 5: 4.NBT.A.1-3 Place value & rounding
- Puzzle 6: 4.MD.A.1-2 Measurement conversion word problems
- Puzzle 7: 4.NF.B.3b Match mixed numbers, improper fractions & fraction decompositions
- Puzzle 8: 4.OA.A.3; 4.NBT.B.4-6; 4.OA.A.1-2 Multi-step word problems, multiplicative comparison, multi-digit problems
- Puzzle 9: 4.NBT.B.6 Divide up to four digits by one digit
- Puzzle 10: 4.MD.B.4; supporting 4.NF.B.3c Fractional line plot
- Puzzle 11: 4.OA.A.1-2 Multiplicative comparison
- Puzzle 12: 4.NF.B.3a Add & subtract fractions with like denominators
- Puzzle 13: 4.NBT.A.1, 4.NBT.A.3 Place value & roundin

- Puzzle 14: 4.NBT.B.4 Multi-digit addition and subtraction
- Puzzle 15: 4.NBT.A.2 Order multi-digit numbers in different forms
- Puzzle 16: 4.OA.C.5 Numerical and shape patterns
- Puzzle 17: 4.MD.A.3 Area & perimeter with unkown dimensions
- Puzzle 18: 4.NBT.B.6 Division & interpreting remainders
- Puzzle 19: 4.NF.B.3d Word problems adding & subtracting fractions with like denominators
- Puzzle 20: 4.OA.A.3, 4.NBT.B.4-6 Multi-step word problems
- Bonus Puzzle 1: 4.OA.B.4 Factors, multiples, prime & composite numbers
- Bonus Puzzle 2: 4.MD.A.1, 4.MD.A.3, 4.NBT.B.5 Convert measurements, apply the area formula, multi-digit multiplication
- Bonus Puzzle 3: 4.NBT.B.5-6 Multi-step operations
- Bonus Puzzle 4: 4.NBT.B.4 Multi-digit arithmetic challenge

