

# 37 Super Fun Holiday Math Puzzles

GRADES K-8

$$\text{Penguin} + \text{Fox} = 10$$

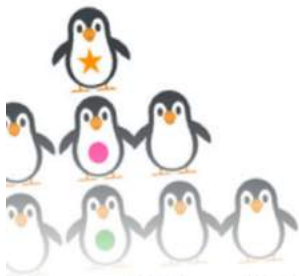
$$\text{Deer} = 14$$

### TWO TRUTHS & ONE LIE!

Use your math skills to determine which of the three statements below is a dirty lie! Explain how you made your decision.

1)  +  = 8 →  = 16

26



$$2 \times \text{Gift} + \text{Tree} = 10$$

2		
	0	
8		
	0	



## ***Welcome to Mashup Math!***

The winter holiday season is here and it's a wonderful time to channel your students' excitement and enthusiasm for this magical time of year into fun and engaging learning experiences!

On the following pages, you will find 37 holiday-themed puzzles that you can use to inject some fun into your upcoming math lessons both in the classroom and at home. The puzzles and challenges are super fun to solve and are an excellent way to get your kids thinking and problem-solving creatively and mathematically (and even algebraically, way before they ever step foot inside of an algebra class!).

So, go ahead and share these puzzles with your kids and find out why more and more teachers rely on Mashup Math to make their lessons fun and engaging all year long. Enjoy!



Anthony Persico :)  
Founder, Mashup Math



Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #1

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Wreath} + \text{Wreath} = 6$$

$$\text{Wreath} + \text{Snowglobe} = 5$$

$$\text{Sack} + \text{Snowglobe} = 8$$

$$\text{Sack} + \text{Wreath} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #2

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Candy Cane} + \text{Mug} = 5$$

$$\text{Candy Cane} + \text{Candy Cane} = 2$$

$$\text{Mug} + \text{Gift} = 6$$

$$\text{Gift} + \text{Candy Cane} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #3

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Snowman} + \text{Snowman} = 6$$

$$\text{Tree} + \text{Snowman} = 10$$

$$\text{Tree} - \text{House} = 3$$

$$\text{House} + \text{Snowman} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #4

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Snowman} + \text{Gift} = 11$$

$$\text{Snowman} + \text{Snowman} = 10$$

$$\text{Gift} - \text{Ornament} = 3$$

$$\text{Snowman} - \text{Ornament} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #5

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Reindeer} + \text{Snow Globe} = 5$$

$$\text{Socks} - \text{Reindeer} = 2$$

$$\text{Socks} + \text{Socks} = 8$$

$$\text{Socks} - \text{Snow Globe} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #6

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Christmas Tree} + \text{Christmas Tree} + \text{Christmas Tree} = 9$$

$$\text{Gingerbread Man} - \text{Christmas Tree} = 7$$

$$\text{Gingerbread Man} + \text{Reindeer Antlers} = 12$$

$$\text{Christmas Tree} + \text{Gingerbread Man} + \text{Reindeer Antlers} = ?$$

? = \_\_\_\_\_



Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #7

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Green Ornament} \times \text{Green Ornament} = 4$$

$$\text{Brick Chimney} + \text{Green Ornament} = 9$$

$$\text{Brick Chimney} - \text{Snow Globe} = 3$$

$$\text{Snow Globe} \times \text{Green Ornament} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #8

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Holly} - \text{Branch} = 1$$

$$\text{Holly} + \text{Holly} = 20$$

$$\text{Mug} + \text{Branch} = 15$$

$$\text{Mug} + \text{Holly} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #9

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Tree} + \text{Tree} = 10$$

$$\text{Tree} \times \text{Gift} = 35$$

$$\text{Ornament} + \text{Gift} = 20$$

$$\text{Tree} + \text{Ornament} + \text{Gift} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #10

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Santa} \times \text{Santa} = 36$$

$$\text{Mug} + \text{Santa} = 26$$

$$\text{Candy} + \text{Santa} + \text{Santa} = 15$$

$$\text{Santa} + \text{Mug} + \text{Candy} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #11

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Tree} + \text{Tree} = 20$$

$$\text{Tree} \times \text{Cookie} = 80$$

$$\text{Snowman} \times \text{Cookie} = 40$$

$$\text{Tree} + \text{Snowman} + \text{Cookie} = ?$$

? = \_\_\_\_\_

## Holiday Puzzle #12

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Snowman} + \text{Star} = 20$$

$$\text{Shopping Bag} = \text{Snowman} + \text{Snowman}$$

$$\text{Shopping Bag} + \text{Snowman} = 18$$

$$\text{Star} = ?$$

? = \_\_\_\_\_

## Holiday Puzzle #13

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Penguin} + \text{Fox} = 10$$

$$\text{Deer} + \text{Deer} = 14$$

$$\text{Deer} - \text{Fox} = 6$$

$$\text{Penguin} + \text{Dove} = 14$$

$$\text{Dove} = ?$$

? = \_\_\_\_\_

## Holiday Puzzle #14

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Tree} + \text{Snowman} + \text{Tree} = 17$$

$$2 \times \text{Deer} + \text{Snowflake} = 12$$

$$\text{Deer} = \text{Snowflake}$$

$$\text{Deer} - 3 = \text{Snowman}$$

$$\text{Tree} = ?$$

? = \_\_\_\_\_



Name: \_\_\_\_\_

Date: \_\_\_\_\_

## ***Holiday Puzzle #15***

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Cookie} + \text{Cookie} - \text{Glass} = 15$$

$$\text{Cookie} - \text{Gift} = 3$$

$$\text{Bow} = 9 - 3 + 2$$

$$\text{Gift} + \text{Bow} = 15$$

$$\text{Glass} = ?$$

? = \_\_\_\_\_

## Holiday Puzzle #16

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Pancakes} + \text{Pancakes} = 26$$

$$11 - \text{Coffee} = \text{Cake}$$

$$\text{Coffee} + \text{Pancakes} = 17$$

$$\text{Cake} - \text{Coffee} = 3$$

$$\text{Cake} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #17

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Snowman} + \text{Carrot} + \text{Carrot} = 9$$

$$\text{Gift} - 3 + \text{Gift} = 13$$

$$\text{Squirrel} + \text{Gift} = 14$$

$$\text{Carrot} + 4 = \text{Squirrel}$$

$$\text{Snowman} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## ***Holiday Puzzle #18***

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Gingerbread Man} + \text{Yellow Bells} = 40$$

$$12 - \text{Candy Cane} = \text{Candy Cane}$$

$$\text{Candy Cane} + \text{Gingerbread Man} = 31$$

$$\text{Yellow Bells} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #19

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Tree} + \text{Tree} + \text{Tree} = 27$$

$$\text{Tree} + \text{Cake} + \text{Cake} = 29$$

$$\text{Candy} = \text{Cake} - \text{Tree}$$

$$\text{Tree} + \text{Cake} + \text{Candy} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #20

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Christmas Tree} \times \text{Reindeer Antlers} \times \text{Christmas Tree} = 64$$

$$\text{Christmas Tree} + \text{Gingerbread Man} + \text{Gingerbread Man} = 50$$

$$16 = \text{Reindeer Antlers} \times \text{Christmas Tree}$$

$$\text{Gingerbread Man} + \text{Hot Cocoa} + \text{Reindeer Antlers} = 49$$

$$\text{Hot Cocoa} + \text{Reindeer Antlers} - \text{Gingerbread Man} = ?$$

? = \_\_\_\_\_

## Holiday Puzzle #21

**Directions:** Find the value of each symbol and the '?' in the puzzle below:

$$\text{Christmas Tree} \times \text{Reindeer Antlers} \times \text{Christmas Tree} = 512$$

$$\text{Christmas Tree} + \text{Gingerbread Man} + \text{Gingerbread Man} = 42$$

$$128 = \text{Reindeer Antlers} \times \text{Christmas Tree} \times 2$$

$$\text{Gingerbread Man} + \text{Hot Cocoa} + \text{Reindeer Antlers} = 102$$

$$\text{Hot Cocoa} + \text{Reindeer Antlers} \times \text{Gingerbread Man} = ?$$

? = \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## ***Holiday Puzzle #22***

**Directions:** What is the value of the '?' in the sequence?



? = \_\_\_\_\_



Name: \_\_\_\_\_

Date: \_\_\_\_\_

## ***Holiday Puzzle #23***

**Directions:** How many candy canes will be in Case #5 and Case #8?



Case #5: \_\_\_\_\_

Case #8: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

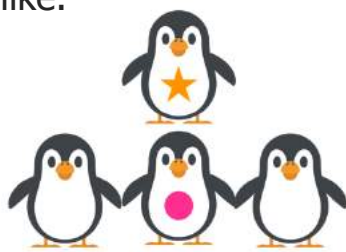
## Holiday Puzzle #24

**Directions:** Find the value of each symbol in the multiplication table below.

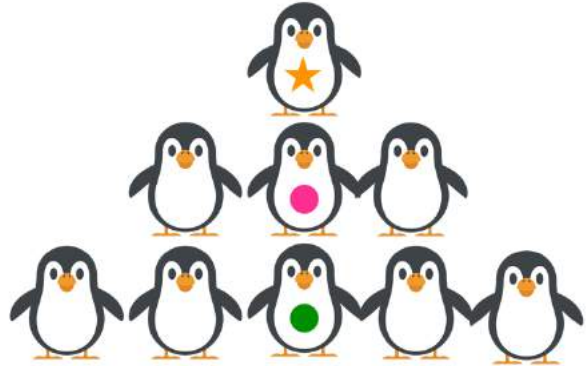
	2		
		0	
	8		
	10	0	

# Holiday Puzzle #25

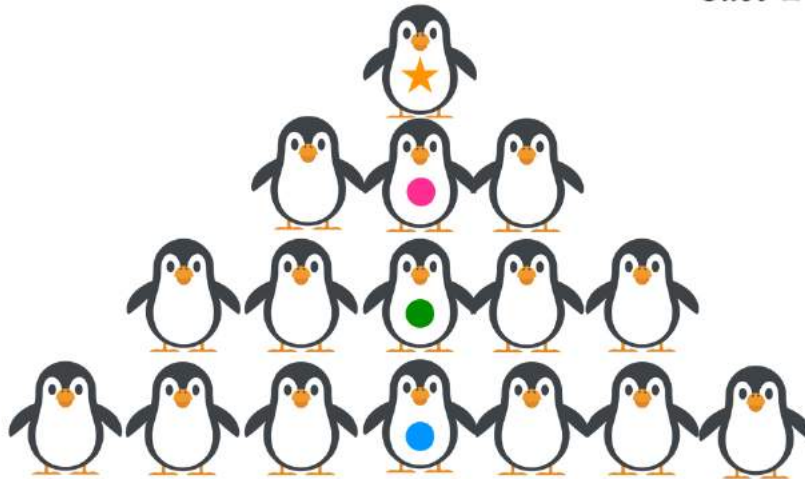
**Directions:** What is the relationship between each case? Sketch what you think the 5<sup>th</sup> case would look like.



**Case 1**



**Case 2**



**Case 3**

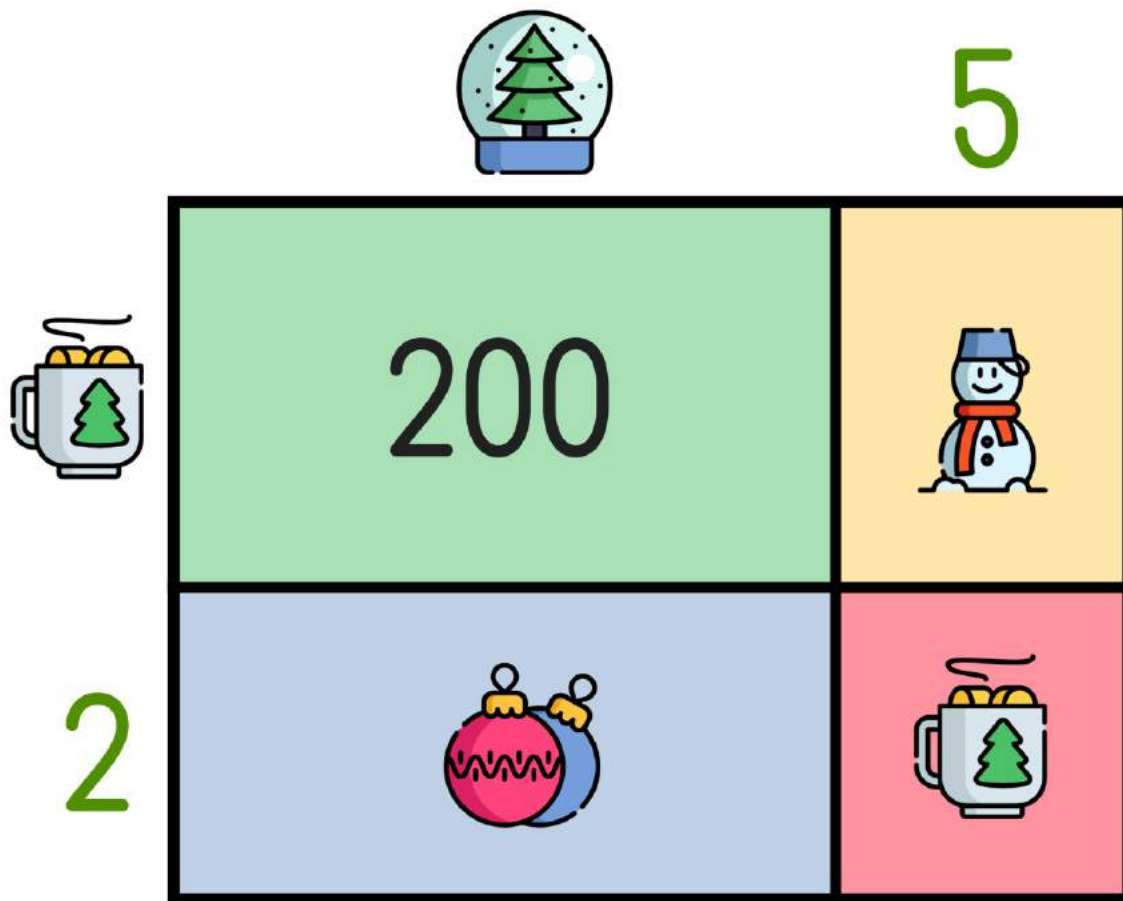
**Case#5 Sketch**





Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Holiday Puzzle #26

**Directions:** Find a value for each icon in the area model below so it represents the value 300.



			
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## ***Holiday Puzzle #27***

**Directions:** How many total squares are in the diagram below?



**Hint: Some squares are overlapping!**

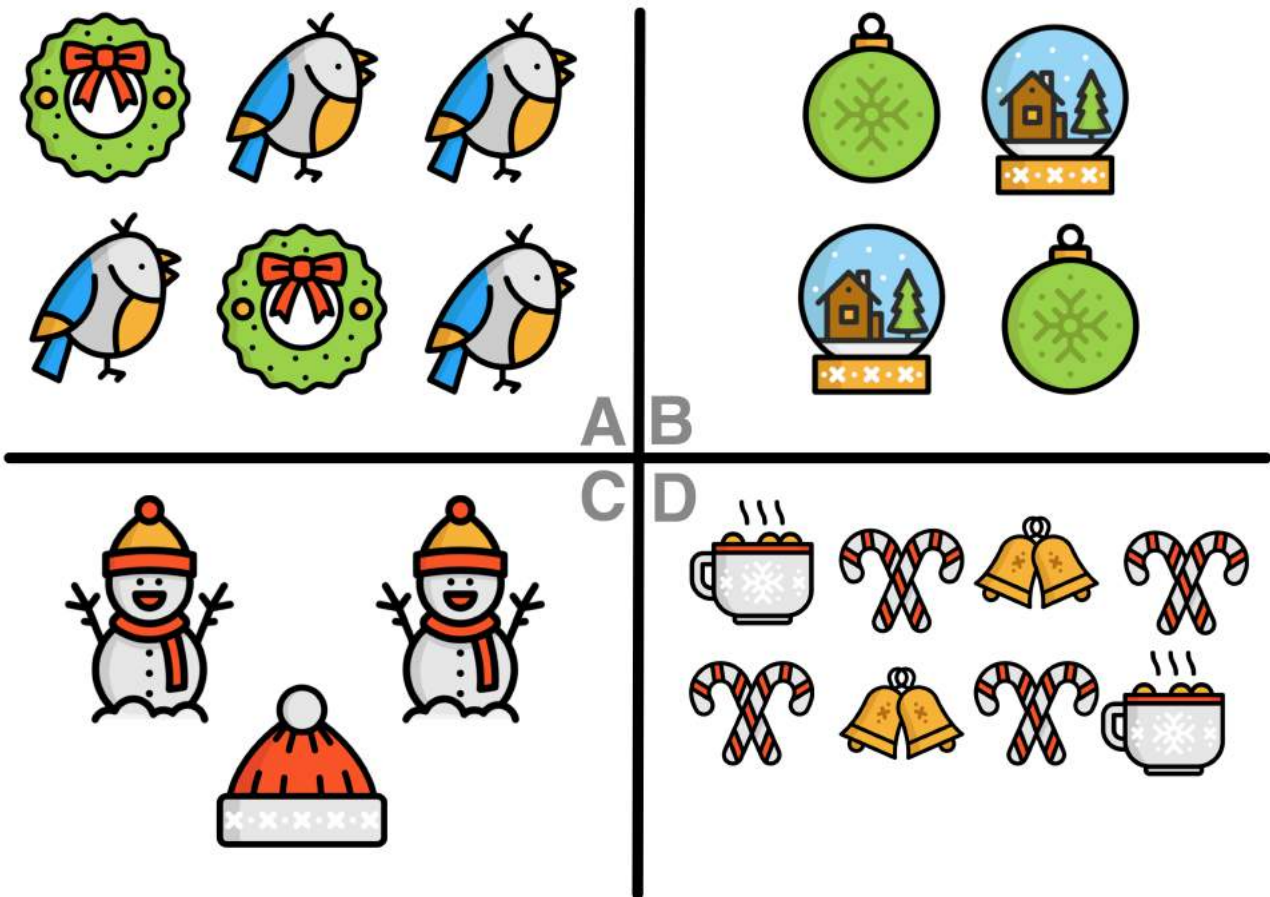
My Answer:

Name: \_\_\_\_\_

Date: \_\_\_\_\_

# Holiday Puzzle #28

## Which One Doesn't Belong?



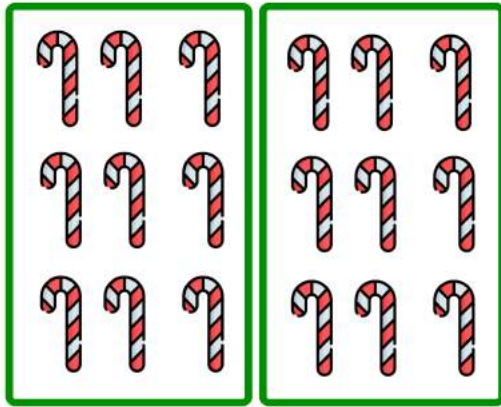
I believe that \_\_\_\_\_ does not belong because...

Name: \_\_\_\_\_

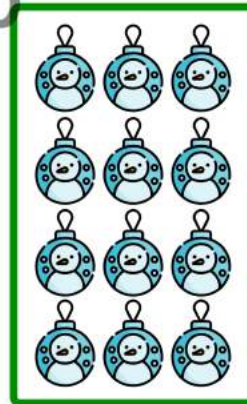
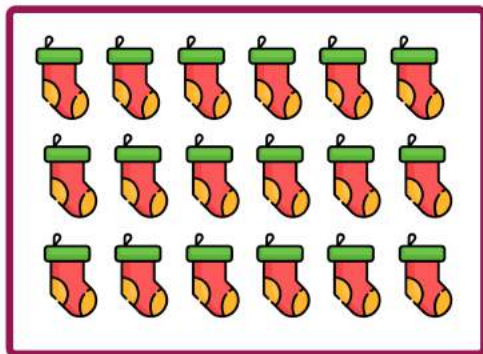
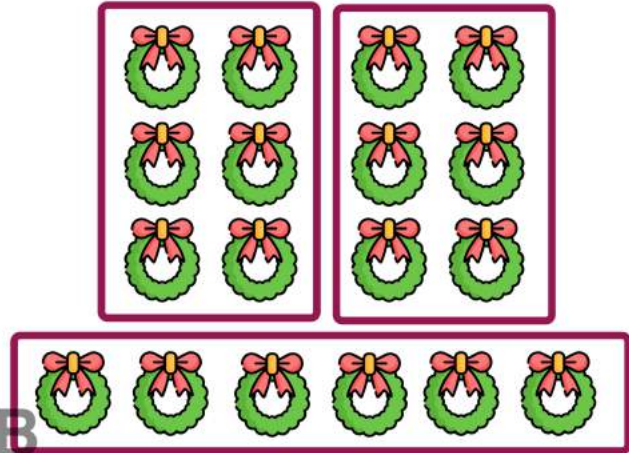
Date: \_\_\_\_\_

# Holiday Puzzle #29

## Which One Doesn't Belong?



A B  
C D



I believe that \_\_\_\_\_ does not belong because...

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## ***Holiday Puzzle #30***

### **Directions:**

*Buddy and Hermey were both born on Christmas Eve. When Buddy was 6 years old, Hermey was half his age. If Buddy turns 100 years old this Chris Eve, how old is Hermey going to be?*



My Answer:



Name: \_\_\_\_\_

Date: \_\_\_\_\_

## ***Holiday Puzzle #31***

### **Directions:**

*At a holiday market, the total cost for a cup of hot cocoa and a cookie is \$1.80. If a cup of hot cocoa costs one dollar more than a cookie, how much does a cup of hot cocoa cost?*



My Answer:

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## ***Holiday Puzzle #32***

### **Directions:**

*Nick has a box of ornaments that he uses to decorate his tree each year.*

*All of them are blue, except for six.*

*All of them are green, except for six.*

*All of them are red, except for six.*



*How many of each colored ornament does Nick have?*



My Answer:

**Holiday Puzzle #33****TWO TRUTHS & ONE LIE!**



Use your math skills to determine which of the three statements below is a dirty lie! Explain how you made your decision.

1)  8  $\rightarrow$   = 16

26

2)  8   $\rightarrow$   = 12

32

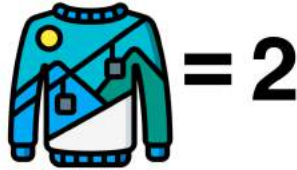
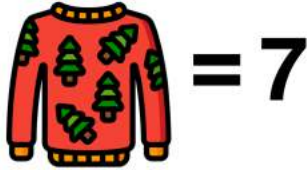
3) 88   $\rightarrow$   = 11

99

My Answer: \_\_\_\_\_

**Holiday Puzzle #34****TWO TRUTHS & ONE LIE!**

Use your math skills to determine which of the three statements below is a dirty lie! Explain how you made your decision.



$$1) \frac{5}{3} = \frac{3}{3} + \frac{\text{blue sweater}}{3}$$

$$2) \frac{\text{red sweater}}{4} = \frac{3}{4} + \frac{4}{4}$$

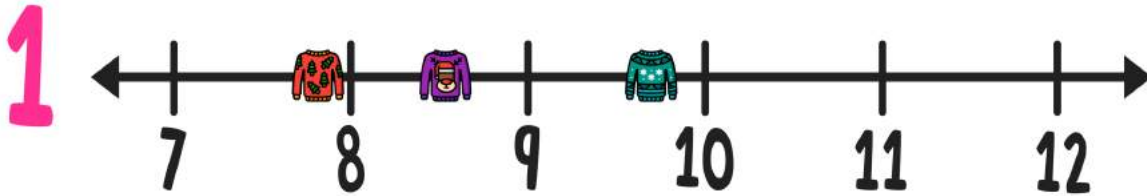
$$3) \frac{\text{red sweater}}{5} = \frac{5}{5} + \frac{\text{purple sweater}}{5}$$

My Answer: \_\_\_\_\_

**Holiday Puzzle #35****TWO TRUTHS & ONE LIE!**

Use your math skills to determine which of the three statements below is a dirty lie! Explain how you made your decision.

$$\begin{array}{ccc}
 \text{Red sweater with trees} = 7\frac{7}{8} & \text{Purple sweater with Santa} = 8\frac{1}{2} & \text{Teal sweater with snowflakes} = 9\frac{5}{6}
 \end{array}$$



**2**

$$\text{Teal sweater with snowflakes} - \text{Purple sweater with Santa} = \frac{1}{3}$$

**3**

$$\text{Red sweater with trees} + \text{Purple sweater with Santa} > \text{Teal sweater with snowflakes}$$

My Answer: \_\_\_\_\_

**Holiday Puzzle #36****TWO TRUTHS & ONE LIE!**

Use your math skills to determine which of the three statements below is a dirty lie! Explain how you made your decision.

**SWEATER SALE!**

\$12.77



\$12.89



\$17.77



\$20.16

$$1) 3 \times \text{Red Sweater} < \underline{\$49.99}$$

$$2) \text{Purple Sweater} + \text{Red Sweater} + \text{Green Sweater} = \underline{\$43.43}$$

$$3) \text{Blue Sweater} \times 6 - \text{Purple Sweater} < \underline{\$109.99}$$

My Answer: \_\_\_\_\_

## Holiday Puzzle #37

# TWO TRUTHS & ONE LIE!

Use your math skills to determine which of the three statements below is a dirty lie! Explain how you made your decision.



- 1) There were more yellow sweaters sold than there were red sweaters sold on Day 4.
- 2) The number of red sweaters sold on Day 7 was double the amount of red sweaters sold on Day 4.
- 3) Blue sweaters were the best-seller for the first four days of sales.

My Answer: \_\_\_\_\_

# ANSWER KEY

1.)  
Wreath=3  
Snow Globe=2  
Presents=6  
?=9

2.)  
Candy Cane=1  
Hot Cocoa=4  
Present=2  
?=3

3.)  
Snowman=3  
Tree=7  
Cabin=4  
?=7

4.)  
Snowman=5  
Present=6  
Ornament=3  
?=2

5.)  
Reindeer=2  
Snow Globe=3  
Stockings=4  
?=1

6.)  
Tree=3  
Gingerbread  
Man=10  
Antlers=2  
?=15

7.)  
Ornament=2  
Chimney=7  
Snow Globe=4  
?=8

8.)  
Holly=10  
Ornaments=9  
Hot Cocoa=6  
?=16

9.)  
Tree=5  
Gift=7  
Ornaments=13  
?=25

10.)  
Santa=6  
Hot Cocoa=20  
Candy Cane=3  
?=29

11.)  
Tree=10  
Cookie=8  
Snowman=5  
?=23

12.)  
Snowman=6  
Gifts=12  
Star=14  
?=14

13.)  
Penguin=9  
Reindeer=7  
Fox=1  
Dove=5  
?=5

14.)  
Tree=8  
Snowman=1  
Reindeer=4  
Snowflake=4  
?=8

15.)  
Cookies=10  
Milk=5  
Present=7  
Ribbon=8  
?=5

16.)  
Pancakes=13  
Coffee=4  
Cake=7  
?=7

17.)  
Present=8  
Snowman=5  
Carrot=2  
Chipmunk=6  
?=5

18.)  
Gingebread  
Man=25  
Bells=15  
Candy Cane=6  
?=15

19.)  
Tree=9  
Cake=10  
Candy Cane=1  
?=20

20.)  
Tree=4  
Antlers=4  
Gingerbread  
Man=23  
Hot Cocoa=22  
?=3

21.)  
Tree=8  
Gingerbread  
Man=17  
Antlers=8  
Hot Cocoa=77  
?=213

22.)  
?=121

Each value is one more than three times the value of the number that comes before it.

23.)  
1,3,6,10,...

Notice that the first value increases by 2, the second value increases by 3, the third value increases by 4, etc.

Case 5: 15

Case 8: 36

24.)  
Present: 0

Tree = 1

Candy Cane = 2

Cookie: 0

Snowman = 4

Snowflake: 5

25.)  
Case 4: 25  
Penguins

Case 5: 36  
Penguins

Case n:  
 $(n+1)^2$

26.)  
Snow  
Globe=20  
Snowman=50  
Ornaments=40  
Hot Cocoa=10

27.)  
There are 14  
total squares

28.)  
Student's  
Choice

29.)  
Student's  
Choice

30.)  
When Buddy is 100, Hermey will be 97

31.)  
Hot Cocoa costs \$1.40 and a cookie costs \$0.40.

32.)  
Nick has 9 ornaments in total: 3 green, 3 blue, 3 red

33.)  
Statement 1 is the lie

34.)  
Statement 3 is the lie

35.)  
Statement 2 is the lie

36.)  
Statement 1 is the lie

37.)  
Statement 2 is the lie



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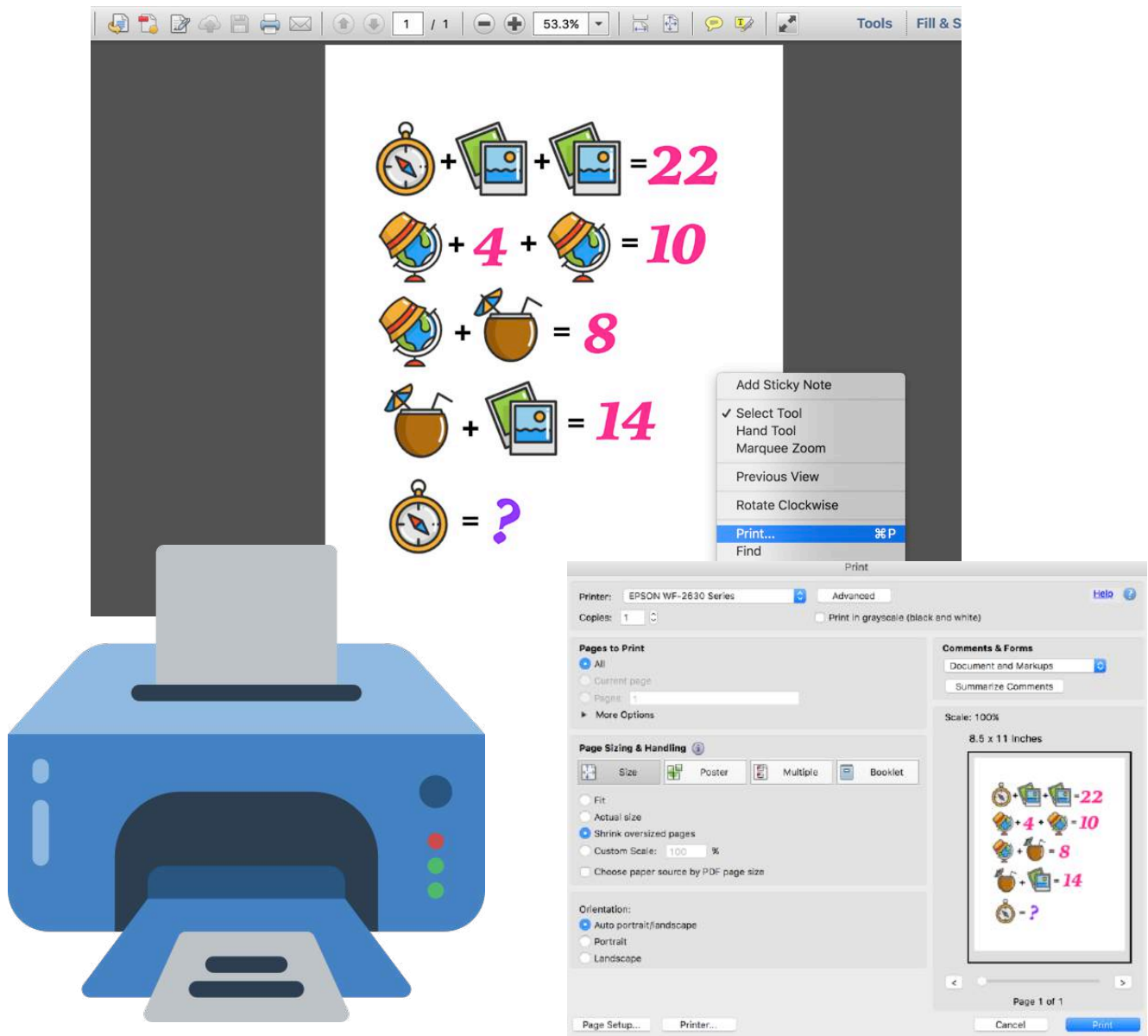
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