

Name _____

Problem-a-palooza

*Find the eighteenth multiple of 6

*Find the tenth multiple of 32

*Find the nineteenth multiple of 5

*Find the thirteenth multiple of 7

Name _____

*There is a ping-pong ball at the bottom of a hole longer than your arm and too thin to stick your hand down the hole. There are no long sticks around. How can you remove the ping-pong ball from the hole?

Name _____

Problem-a-palooza

*Would you rather have eleven thousand seven hundred and eighty three dollars or \$9,825?
Why? Explain your thinking.

*Find all factors of 24.

*Find the eighth multiple of 24.

*Find the thirteenth multiple of 21.

*Find the fourteenth multiple of 16.

*Find all factors of 28.

*Jamie has 35 old video games. Jamie's friend Kyle has 7 video games. The video game store will trade 7 old games for 1 new game. If Jamie trades in all of his old video games, how many new video games will he get?

What information is given that is not needed?

Find the answer to the problem and explain your thinking.

Problem-a-palooza

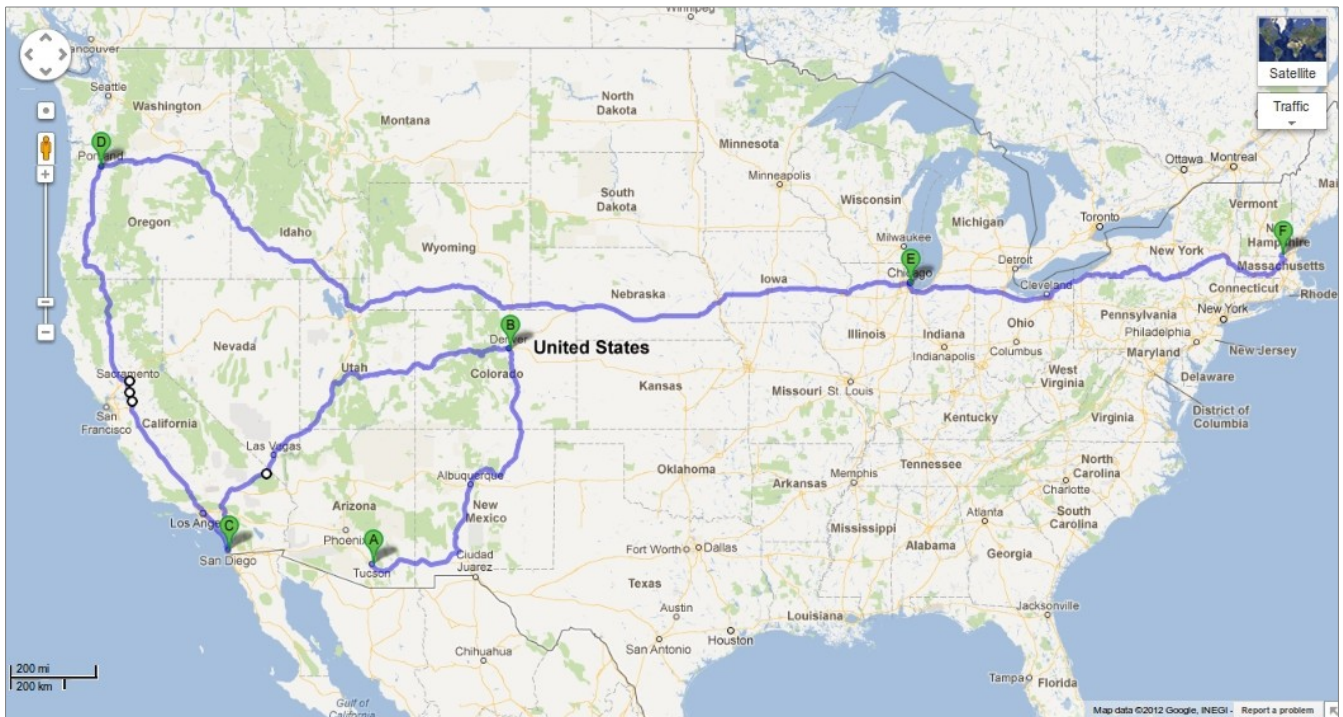
*Find all factors of 72.

*How can you turn a full cup of water upside down without spilling any of the water? You may not use a lid.

*We are planning a pizza party for 4th grade. There are 23 students Mrs. Sagitori's class, 23 students in Mrs. Hunley's class, and 2 teachers. A medium pizza costs \$11 and has 8 slices. If we buy 12 medium pizzas, how many slices will each person get to eat?

Name _____

*Ms. Hine is planning an epic road trip to see her friend who lives in New Hampshire. Her drive will be 10,000 km long.



It is 1439 km from Tucson to Denver, and 1735 km from Denver to San Diego. After reaching San Diego, how far does Ms. Hine still need to drive?

After driving a total of 8343 km, Ms. Hine is in Chicago. How far does she still need to drive to get to New Hampshire?

Problem-a-palooza

**Lucky Lockers—Part 2*

Mr. O (our principal) won the lottery!!! And great news! He wants to share his money with a few lucky 4th graders at Howell elementary school!!! We have 15 lockers outside of our classroom.

Mr. O gives each student a stack of dollars to place in the lockers:

- The first student places \$1 in each locker.
- The second student places \$1 in every second locker, starting with locker number 2. (He places \$1 in locker number 2, \$1 in locker number 4, \$1 in locker number 6, ...)
- The third student places \$1 in every third locker, starting with locker number 3. (She places \$1 in locker number 3, \$1 in locker number 6, \$1 in locker number 9, ...)
- And so on.
- Lastly, the 15th student places \$1 in locker number 16.

Which locker will you choose? How much money will be in that locker?

Which locker will have the least amount of money in it?

Name _____

*For school field day, we will have a giant 4-way game of capture the flag. There are 56 students that we need to divide into four equal teams. How many students will be on each team?

*Complete the pattern:

A, B, B, A, B, A, B, B, _____, _____, _____, _____, _____,
_____, _____, . . .

*I am planning a birthday party for my sister. She is turning 9 years old. I want to invite 10 of her friends to the movies at 3:00pm. Each movie ticket costs \$9. If my sister, her friends and I all go to the movies, how much money do I need to bring for movie tickets?

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Problem-a-palooza

*Last weekend the Redskins vs. Steelers game had a final score of 12 to 27.

In football, the scoring system is:

Touchdown = 6 points
Extra Point Conversion = 1 point
Two-Point Conversion = 2 points
Field Goal = 3 points
Safety= 2 points

To use a conversion, you must pair it with a touchdown.

Find three possible ways that the teams could have this final score.

(For example, the Redskins could score 2 touchdowns, and the Steelers could score 4 touchdowns and 1 field goal. You cannot use this as one of your combinations.)

*Where does $10 + 3 = 1$?

Name _____

*Ms. Hine is having 13 people over for Thanksgiving. Each person wants to eat 3 turkey drumsticks. How many turkeys does Ms. Hine need to order? Explain your thinking.

*Ms. Hall's orchestra needs to travel to a performance. There are 12 woodwinds, 20 brass instruments, 9 percussion, and 74 string instruments. If 12 people fit in a van, how many vans will it take to transport the entire orchestra? Explain your thinking.

*Place the other letters of the alphabet above or below the line given below using the same rule that was used for A through I.

A E F H I

B C D G

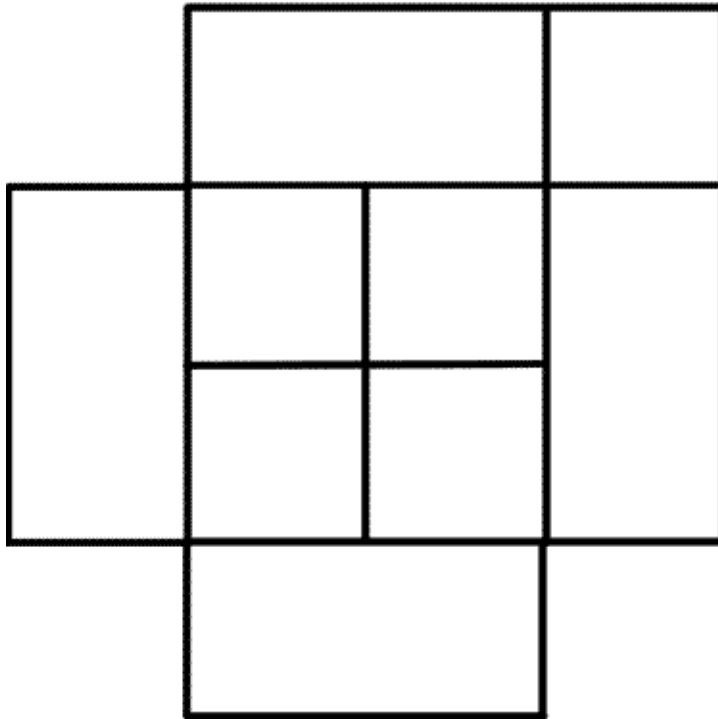
Name _____

Problem-a-palooza

1. Complete the pattern:

M, T, W, T, _____, _____, _____.

2. How many squares do you see?



3. A man buys a horse for 50 dollars. Decides he wants to sell his horse later and gets 60 dollars. He then decides to buy it back again and paid 70 dollars. However, he could no longer keep it and he sold it for 80 dollars.

Did he make money? lose money? or break even? Explain why.

4. The Pilgrim, the wolf, and the turkey

The pilgrim wants to get his turkey, wolf and giant bag of corn to the other side of the river. His boat isn't very big and it can only carry him and either his turkey, his wolf or his corn. Now....if he leaves the turkey alone with the corn, the turkey will gobble up the corn. If he leaves the wolf alone with the turkey, the wolf will gobble up the turkey. When the pilgrim is present, the turkey and corn are safe from being gobbled up by their predators.

How does the pilgrim manage to get everything safely to the other side of the river?

5. Write and solve a division story to go with the problem $83 \div 6$.

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Problem-a-palooza

1. "I look in my closet, and the problems get worse:
I have 1 white shirt, 3 blue shirts, 3 striped shirts, and that 1 ugly plaid
shirt my Uncle Zeno set me." (Jon Scieszka, *Math Curse*)
I also have 3 pairs of pants and 2 pairs of shoes.

How many outfits do I have? How many outfits do I have if I don't
wear that ugly plaid shirt? Explain your thinking.

2. Write and solve a division story to go with the problem
 $184 \div 8$

3. Mary's mother has 4 kids. The oldest child is named April. The
next oldest is named May. The second youngest child is named
June. What is the name of the youngest child?

4. **Lucky Lockers—Part 3*

Mr. O (our principal) won the lottery (again)!!! And great news! He wants to share his money with a few lucky 4th graders at Howell elementary school!!! We have 11 lockers outside of our classroom.

Mr. O gives each student a stack of dollars to place in the lockers:

- The first student places \$1 in each locker that is a multiple of one.
- The second student places \$2 in each locker that is a multiple of two.
- The third student places \$3 in each locker that is a multiple of three.
- And so on.
- Lastly, the eleventh student places \$11 in each locker that is a multiple of eleven.

Which locker will you choose? How much money will be in that locker? Explain your thinking.

5. Solve the problem and explain your thinking.

$$\begin{array}{r} 31 \\ \times \quad ? \\ \hline 248 \end{array}$$

Name _____

Problem-a-palooza

1. Write and solve a division story which has an answer of 14.

2. "As I was going to St Ives
I met a man with seven wives
Every wife had seven sacks
Every sack had seven cats
Every cat had seven kits
Kits, cats, sacks, wives.
How many were going to St Ives?"

Name _____

3. Find the pattern and explain how you figured it out.

4 ___ 10 13 16 ___ 22

Figure out what each letter represents in the number sentence.

Example: 26 = L. in the A.

Answer: 26 = Letters in the Alphabet.

4. 12 = M. in a Y.

5. 4 = Q. in a G.

6. 88 = K. on a P.

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Problem-a-palooza

1. To make a flag of the United States of America, it takes 3 colors of fabric. How many colors do you need to make 14 U.S. flags? Explain your thinking.

2. Our class has 48 pieces of candy to split. If Victor gets $\frac{1}{4}$ of the candy, and Mila gets $\frac{1}{6}$ of the candy, how many pieces does each one get? What fraction of pieces is left over?

Name _____

3. Some of Mrs. Sartori's and Mrs. Hunley's students line up in a row. If Cydney is #8 counting from the front of the line and #14 counting from the back of the line, how many students are in line? Explain your thinking.

Figure out what each letter represents in the number sentence.

Example: $26 = L$. in the A.

Answer: $26 = \text{Letters in the Alphabet.}$

4. $52 = W$. in a Y.
5. $100 = P$. in a D.
6. $11 = P$. on a S. T.
7. $3 = B$. M. (S. H. T. R.)

Name _____

Problem-a-Palooza!

1. Mrs. Hunley has tootsie rolls to give to our class of 21 students. After giving each student 3 pieces of candy, she has 2 pieces left over. How many tootsie rolls did she start with?

2. Fill in each square to make the addition correct.

$$\begin{array}{r} 7 \square 4 \\ + \square 8 \square \\ \hline 1777 \end{array}$$

3. Alex reads a book that has 96 pages. How many times does the digit 4 appear on the page numbers of the book?

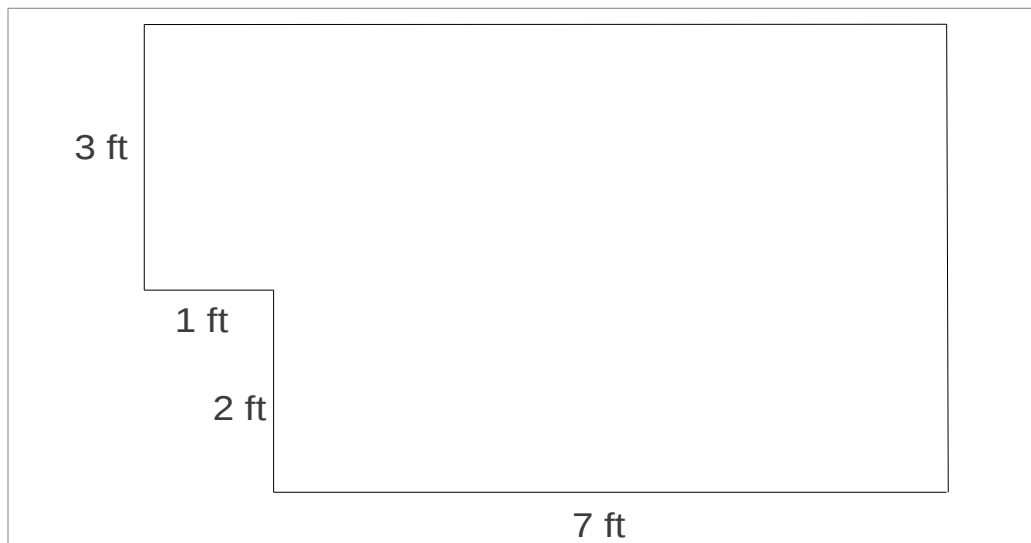
Name _____

4. I arrive at Peter Howell Elementary School at 8:30 am. This morning, it took me 7 minutes to snooze my alarm, and then I spent 15 minutes showering. I tried on 3 different outfits, so it took me 18 minutes to get dressed. I spent 5 minutes cooking my oatmeal and 10 minutes eating. Right before I left, I spent 2 minutes brushing my teeth. It took 20 minutes to drive to school. What time did my alarm first wake me up this morning? Explain your thinking.

5. Solve the following problem. Show your work.

$$(5 + 3) \times 2 - 1 =$$

6. Find the area and perimeter of the figure. (Figure not drawn to scale.) Explain your thinking.



Name _____

Problem-a-Palooza!

1. The ancient Egyptians used a measurement called a cubit to build the pyramids. A cubit was the distance from the bent elbow to the end of the middle finger. Using your own self as a measurement, find out how many inches in a cubit. If a pyramid is 1000 cubits long, about how many inches is that? Explain your thinking.

2. What's my rule? Write the rule and find what happens with 10. Explain your thinking.

$$3 \rightarrow \square \rightarrow 8$$

$$5 \rightarrow \square \rightarrow 14$$

$$7 \rightarrow \square \rightarrow 20$$

$$10 \rightarrow \square \rightarrow ?$$

Name _____

Problem-a-Palooza!

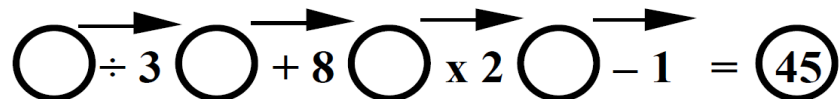
1. Your family is giving you a new deal on your allowance. You can either get \$100 each day for a month, or you can get one penny on the first day that doubles every day for a month.

*So on the first day, you have one cent,
*On the second day, you have two cents,
*On the third day, you have four cents,
*And so on.

Which deal gives you more money? Which deal would you rather choose? Why? Explain your thinking.

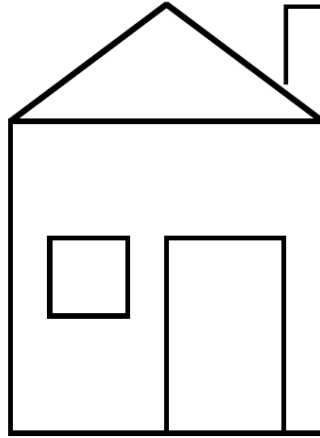
2. Suppose you walk down to the corner, and there are five of your friends standing around. How many handshakes are there if you each shake hands with everyone once?

3. If you begin with a certain two-digit number and follow the arrows, you will end with 45.



Name _____

4. Find all the right angles on the house below. Put a square on each one like this:



5. Each American throws away about 60 pounds of plastic packaging each year. A ton is 2000 pounds. At this rate, about how many years will it take one person to throw away a ton of plastic?

6. What number could be added to 150 so that the sum would be between 500 and 525?

Extra challenge: Find the range of all the numbers that can be added to get this sum.

7. A farmer has seventeen sheep. All but nine died. How many does the farmer have left?