

Kansas City Area Teachers of Mathematics
2016 KCATM Contest

Mathletics

Grade 4

Instructions:

- Do **NOT** turn this page until instructed to do so.
- WRITE YOUR **TEAM NUMBER** AND **SCHOOL NAME** ON THE LINE PROVIDED ON THE FRONT OF EACH SHEET EACH TIME YOU BEGIN A NEW PROBLEM.
- You will want to use a calculator on this test, but **NO** cell phones **calculators can be used!**
- Blank scratch paper can be used. Please do **NOT** write on the team number card, as they are reused each year.
- You may **not** use rulers, protractors or other measurement devices on this test.

Problems # 1-3

This is a relay problem.

Team Number: _____ School: _____

Students: _____

Problems 1-3 (3 minutes, 3 points)

1. What is the **product** of 37 and 7?

Answer: _____

2. Ally saved \$ _____ of her allowance.

(Answer to #1)

She wants to buy a new iPad which costs \$339.
If she gets \$2 a day allowance for chores and she saves it all, in **how many days will Ally have enough money to buy the iPod?**

Answer: _____

3. Alan has _____ fish in his aquarium.

(Answer to #2)

He needs to buy fish food and each fish eats 3 grams of food a day. **How many grams of fish food does he need for one week?**

Answer: _____

TEAM #: _____ **School Name** _____

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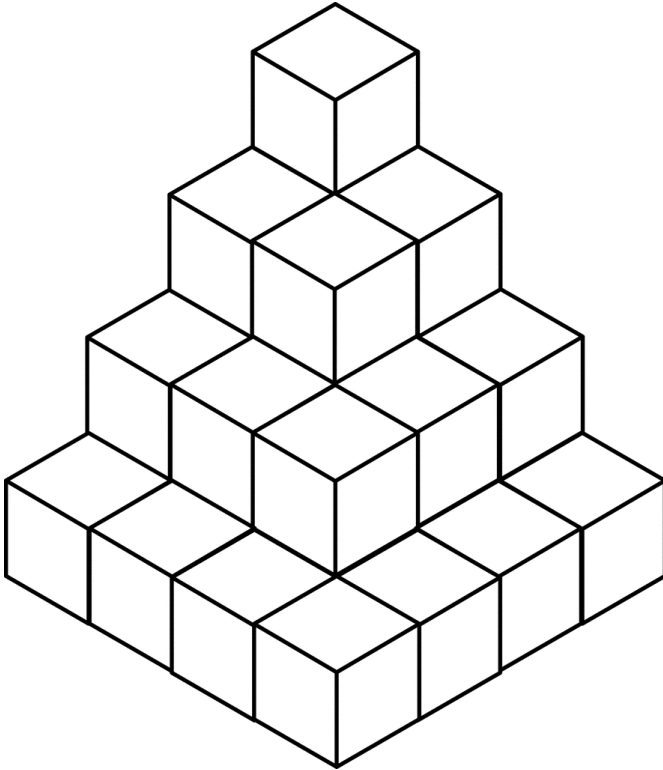
Problem # 4

Do NOT turn the page until you are told to do so.

Team Number: _____ **School:** _____

Problem 4 (2 points, 2 minutes)

This shape with identical cubes was **dipped into paint covering all sides**. How many cubes were **not** painted at all?



ANSWER: _____

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Problem # 5

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Team Number: _____ **School:** _____

Problem 5 *(2 points, 2 minutes)*

If one Earth year (365 days) is equal to 13 Planet Zumba years.

How many Earth years would be in 208 Zumba years?

ANSWER: _____

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Problem # 6

Do NOT turn the page until you are told to do so.

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Problem 6 *(2 minutes, 2 points)*

The **roller coaster** at Atlantic Entertainment Park gives rides to 28 people every three minutes. The **Ferris Wheel** gives rides to 13 people every two minutes. **In one hour, how many more people can ride the roller coaster than the Ferris Wheel?**

ANSWER: _____

TEAM #: _____ **School Name** _____

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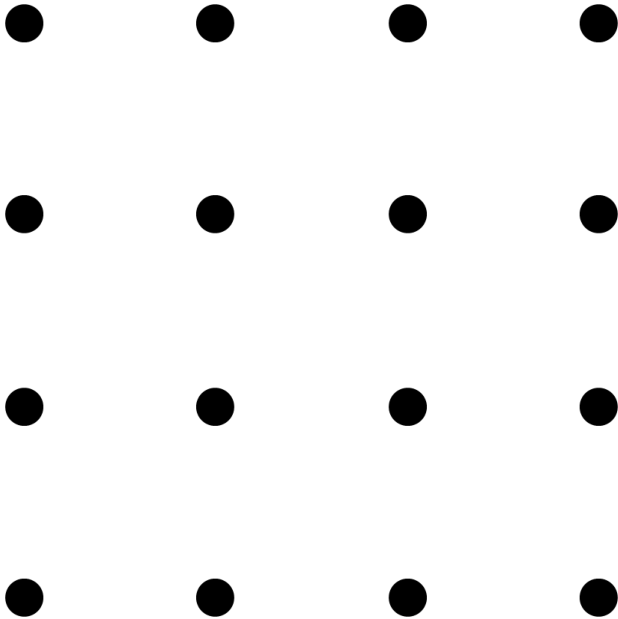
Problem # 7

Do NOT turn the page until you are told to do so.

Team Number: _____ **School:** _____

Problem 7 (2 minutes, 2 points)

In this 16 dot formation, **how many squares can you form** by connecting the dots using only vertical and horizontal lines?



ANSWER: _____

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Problem # 8

Do NOT turn the page until you are told to do so.

Team Number: _____ **School:** _____

Problem 8 (3 points, 3 minutes)

Figure out which lunch belongs to which person by following these clues:

1. Naveen doesn't like fruit and veggies!
2. Jillian does not like potato salad and tuna.
3. Allen's favorite lunch does not include pizza or beans.
4. Rob has a vegetable and fish allergy.
5. Ray likes to dig up her favorite snack!
6. Naveen prefers thin crust.

	Potato Salad	Pizza	Mixed Fruit	Tuna	Green Bean Casserole
Naveen					
Jillian					
Allen					
Rob					
Ray					

ANSWERS:

Naveen _____

Jillian _____

Allen _____

Rob _____

Ray _____

TEAM #: _____ **School Name** _____

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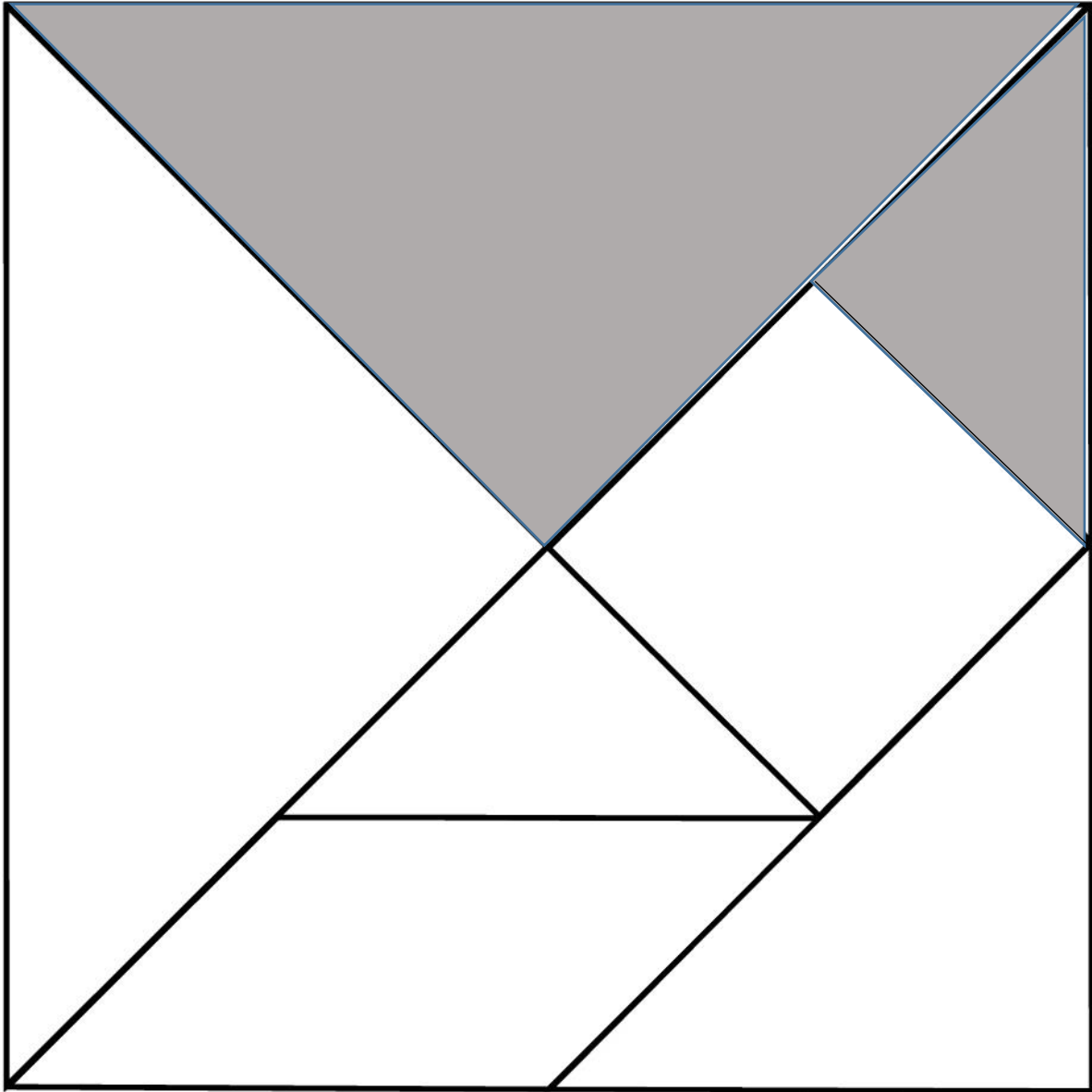
Problem # 9

Do NOT turn the page until you are told to do so.

Team Number: _____ **School:** _____

Problem 9 (3 points, 3 minutes)

The area of the square is 16 square inches. **What is the area of the shaded part?**



ANSWER: _____ sq. in.

TEAM #: _____ **School Name** _____

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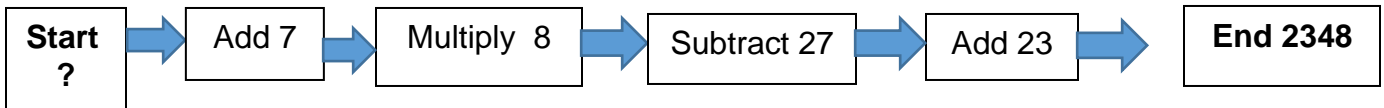
Problem # 10

Do NOT turn the page until you are told to do so.

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Problem 10 (2 points, 2 minutes)

What number goes in the start box in the flowchart?



ANSWER: _____

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Problem # 11

Do NOT turn the page until you are told to do so.

Team Number: _____ **School:** _____

Problem 11 *(2 points, 2 minutes)*

Two years from now I will be 2 times as old as I was 2 years ago. **How old am I now?**

ANSWER: _____

TEAM #: _____ **School Name** _____

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Problem # 12

Do NOT turn the page until you are told to do so.

Team Number: _____ **School:** _____

Problem 12 (1 point, 1 minute)

John removed $\frac{1}{4}$ of the spoons from a drawer for an experiment. Then he removed 10 spoons from the drawer for dinner. **What was the total number of spoons John removed from the drawer, if there were originally 60 spoons in the drawer?**

ANSWER: _____

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Problem # 13

Do NOT turn the page until you are told to do so.









Team Number: _____ **School:** _____

Problem 13 (3 points, 3 minutes)

Write numbers in the shapes to make the equations true.

- Same shapes must have the same values.
- Different shapes must have different values.
- The number at the end of each row and each column is the sum.

What is the value of X?

			16
			17
		X	17
10	27	13	

ANSWER: X = _____

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Problem # 14

Do NOT turn the page until you are told to do so.

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Problem 14 (2 points, 2 minutes)

Find the rule for this input-output table. Once you find the rule, find the value for B.

Input	Output
3	13
8	28
0	4
4	16
7	25
B	10

ANSWER: B = _____

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Problem # 15

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Problem 15 (3 points, 3 minutes)

Fred is going camping with some friends and will need some supplies. **Fred needs:** 2 dozen bottles of water, 3.5 gallons of juice, 3 tents, 25 packets of fruit snacks, 2 compasses, 10 pairs of socks, 7 packages of cut wood, 7 packages of marshmallows and 2 cans of lighter fluid. **How much will Fred's supplies cost?**

Water	\$1.87 per bottle
Juice	\$1.12 per half gallon
Tent	\$124 per tent
Fruit Snack	\$6 per 5 packets
Compass	\$17.53 each
Matches	\$3.25 per box
Socks	\$4.43 per 2 pairs
Wood	\$12.39 per package
Bug Repellent	\$3.29 per bottle
Marshmallows	\$2.35 per package
Band-Aids	\$1.27 per box
Lighter Fluid	\$7.63 per can

ANSWER: _____

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Problem # 16

Do NOT turn the page until you are told to do so.

Team Number: _____ School: _____

Problem 16 *(1 point, 1 minute)*

What is the sum of the numbers 1 through 50?

ANSWER: _____

TEAM #: _____ **School Name** _____

Grade 4 Mathletics - Answer Key

PTS.	#	Solution
1	1	\$259
1	2	40 days
1	3	840 grams
2	4	1 cube
2	5	16 yrs.
2	6	170 people
2	7	14 squares
3	8	Naveen- pizza Jillian – green bean casserole Allen - tuna Rob – mixed fruit Ray – potato salad
3	9	5 sq. inches
2	10	287
2	11	6 yrs.
1	12	25
3	13	$x = 5$
2	14	$B = 2$
3	15	\$630.37
1	16	1275