

Kansas City Area Teachers of Mathematics
2017 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. Find the number of minutes in a week.

Answer: _____ min.

2. Jackson's piano lesson is 40 minutes long. He started the lesson at 10:45. If the clock now reads 11:15, how many minutes does he have left?

Answer: _____ min.

3. You are saving for college. You know the cost for 4 years will total \$40,000. Divide your answer to #1: _____ by your answer to #2: _____ = _____

Let this amount be the amount you have in your college fund. Find the amount you must still save to be able to not take out a loan for college.

Answer: _____

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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)

What is the measure of the acute angle formed by the hands on a clock at exactly 2:00?



ANSWER: _____

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Problem # 5

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Team Number: _____ School: _____

Problem 5 (3 points, 3 minutes)

How many ways can a family of 5 line up for a picture if the father must be in the middle?



ANSWER: _____

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Problem # 6

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Team Number: _____ **School:** _____

Problem 6 (2 minutes, 2 points)

1,000 days after
Wednesday is
what day of the
week?

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
March 2017						
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	Notes:

Blank March 2017 Calendar Printable calendars available from www.blankcalendarprintout.com

ANSWER: _____

TEAM #: _____ **School Name** _____

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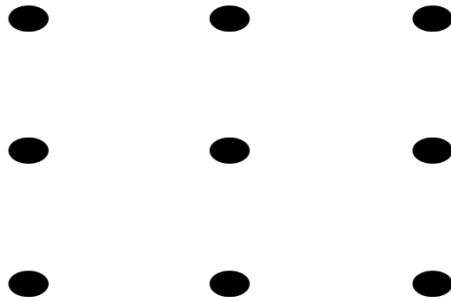
Problem # 7

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

Team Number: _____ **School:** _____

Problem 7 (2 minutes, 2 points)

How many **different rectangles** can be formed when connecting the dots below?



ANSWER: _____

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Problem # 8

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Problem 8 (3 points, 3 minutes)

Arrange the people in order from tallest to shortest.

Fred's (F) height is between the heights of Erwin (E) and Harry (H).

Jonathan's (J) height is between Erwin and Fred.

George's (G) height is between Erwin and Jonathan's.

Erwin is taller than George.

Answer: _____

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Problem # 9

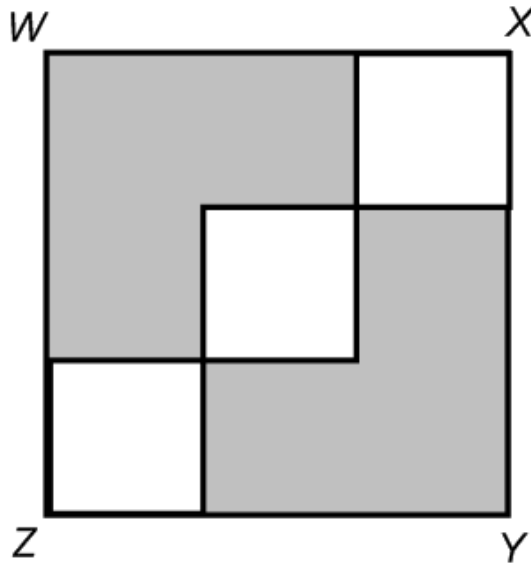
Do NOT turn the page until you are told to do so.

Team Number: _____ **School:** _____

Problem 9 (3 points, 3 minutes)

Find the area of the shaded region in the square.

$$WX = 12 \text{ cm}$$



ANSWER: _____ **sq. in.**

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Problem # 10

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Problem 10 (2 points, 2 minutes)

In 30 years, Karma will be one and a half times as old as she right now.

How old is Karma now?

- A. 20 B. 30 C. 50 D. 60 E. 72



ANSWER: _____

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Problem # 11

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Problem 11 (2 points, 2 minutes)

On a digital clock showing hours and minutes, how many different readings between noon and 6 pm contain **at least two 5's**?



ANSWER: _____

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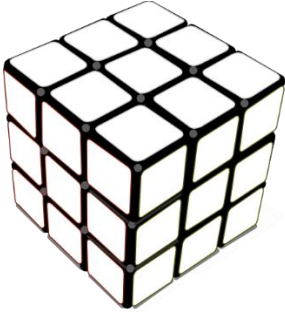
Problem # 12

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

Team Number: _____ **School:** _____

Problem 12 (1 point, 1 minute)

A Rubik cube is dropped in paint. How many of the little squares would have exactly 3 sides painted?



ANSWER: _____

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Problem # 13

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Problem 13 (2 points, 2 minutes)

A ball is dropped and rebounds $\frac{1}{2}$ of the dropped height each time it bounces. It is dropped from 128 feet and keeps on bouncing. How far will it have traveled when it strikes the ground for the 3rd time?



ANSWER: _____ ft.

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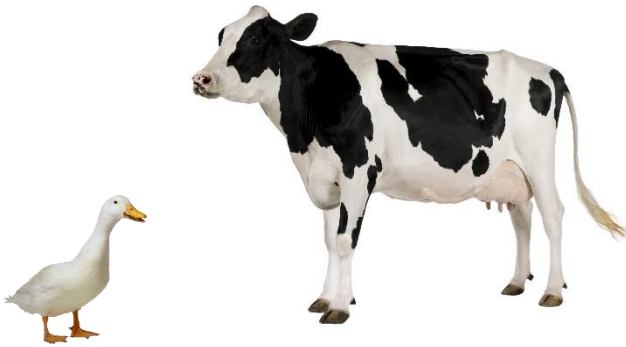
Problem # 14

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

Team Number: _____ School: _____

Problem 14 (3 points, 3 minutes)

Farmer McDonald raises ducks and cows. His animals have a total of 20 heads and 60 legs. How many ducks does he have?



ANSWER: _____ ducks

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Problem # 15

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Problem 15 (3 points, 3 minutes)

Determine how much will be charged on your parent's credit card if your family purchased the following food items and left a 15% tip.

- 3 - Hamburger and French fries at \$7.29 each
- 1 - Soup and Salad for \$8.29
- 1 - Cheese Quesadilla \$5.99
- 5 - Drinks at \$2.29 each



ANSWER: _____

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Problem # 16

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Problem 16 *(1 point, 1 minute)*

Fatima had a part-time job. She earned \$33 in 6 days. At the same rate, Fatima's total earnings should be \$88 in how many more days?

ANSWER: _____

TEAM #: _____ **School Name** _____