Doing Math.

Saving Lives.

mathathon.org

LEVEL 5

FUNBOOK

St. Jude patient Patience, age 10,
Hodgkin lymphoma

St. Jude Children's Research Hospital
ALSAC • Danny Thomas, Founder
Finding cures. Saving children.

ST. JUDE
MATH-A-THON

Curriculum by:
SCHOLASTIC

St. Jude patient Jacob, age 11, brain tumor

Welcome to The St. Jude Math-A-Thon®!

The St. Jude Math-A-Thon is your chance to show what kids can do when they work together. Kids under the care of experts at St. Jude Children's Research Hospital® are battling childhood cancer and other life-threatening diseases, and you can help. St. Jude is leading the way the world understands, treats and defeats childhood cancer and other life-threatening diseases. Families never receive a bill from St. Jude for treatment, travel, housing or food—because all a family should worry about is helping their child live.

Now you can help the kids of St. Jude!

1. Collect sponsors using the online fundraising tools at **mathathon.org**.
2. Complete the five math worksheets in this workbook.
3. Send in your money to your school!

Thank you and good luck!

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Meet Patience

age 10, Tennessee, Hodgkin lymphoma

Patience's family was worried when they noticed her lymph nodes were swollen. When tests revealed Patience had cancer, her family turned to St. Jude Children's Research Hospital®. Patience received medicine, including chemotherapy, as part of her treatment. She is now cancer-free. Patience likes to read and participate in spelling bees.

More about Patience:

Favorite color: Blue
Favorite school subjects: Reading and Language Arts
Favorite food: Hot wings
Favorite hero: My family
Favorite song: "Take Me to the King"
Hobbies: Dancing, singing, arts and crafts, swimming and video games
When I grow up, I want to be a: Radiologist
I am thankful for: My life, family, friends, doctors and the fact that God loves me because He healed me

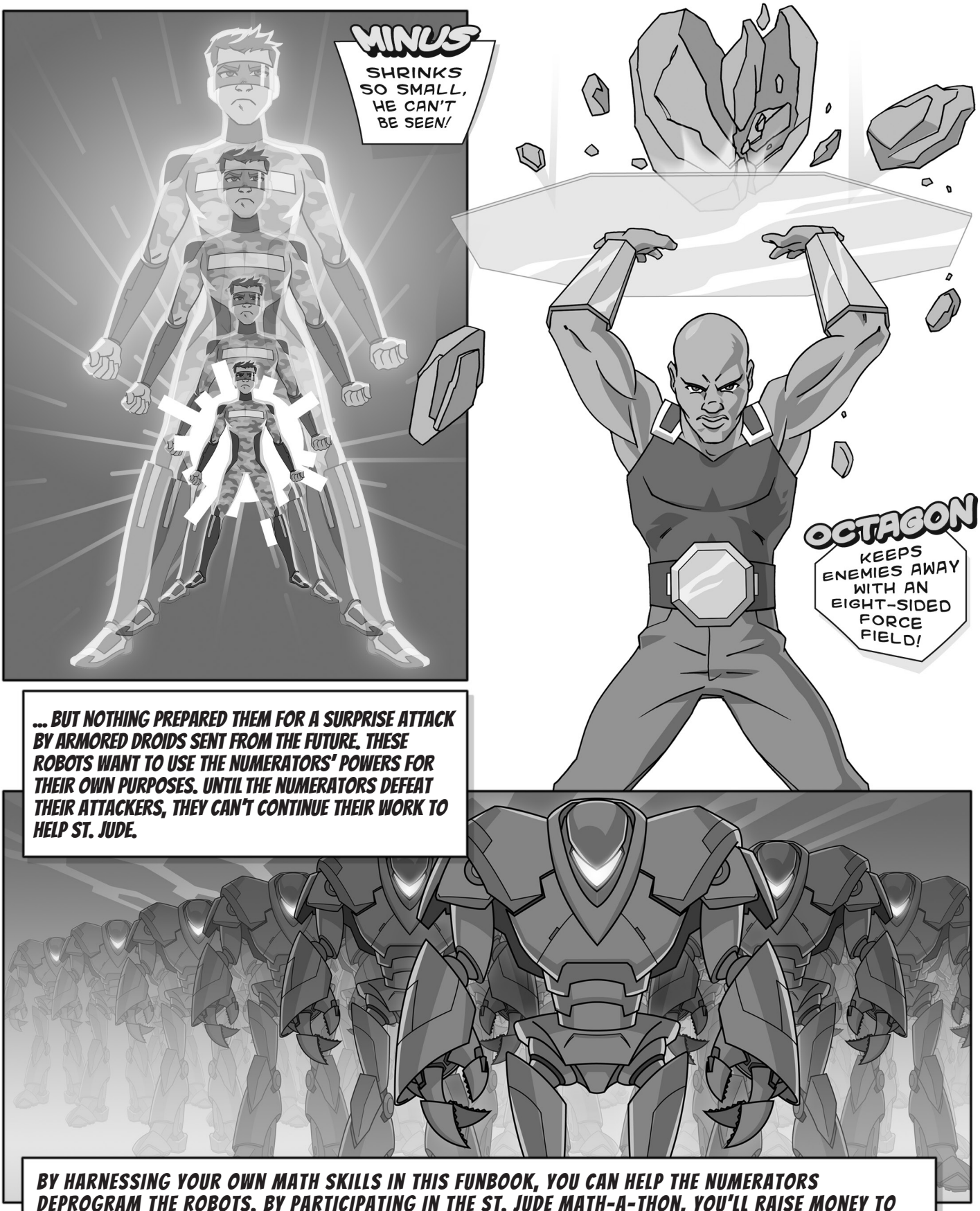
More about you:

Favorite color: _____
Favorite school subject: _____
Favorite food: _____
Favorite hero: _____
Favorite song: _____

_____

Hobbies: _____
When I grow up, I want to be a: _____
I am thankful for: _____

Meet THE NUMERATORS


MINUS
SHRINKS SO SMALL, HE CAN'T BE SEEN!
OCTAGON
KEEPS ENEMIES AWAY WITH AN EIGHT-SIDED FORCE FIELD!
... BUT NOTHING PREPARED THEM FOR A SURPRISE ATTACK BY ARMORED DROIDS SENT FROM THE FUTURE. THESE ROBOTS WANT TO USE THE NUMERATORS' POWERS FOR THEIR OWN PURPOSES. UNTIL THE NUMERATORS DEFEAT THEIR ATTACKERS, THEY CAN'T CONTINUE THEIR WORK TO HELP ST. JUDE.
BY HARNESSING YOUR OWN MATH SKILLS IN THIS FUNBOOK, YOU CAN HELP THE NUMERATORS DEPROGRAM THE ROBOTS. BY PARTICIPATING IN THE ST. JUDE MATH-A-THON, YOU'LL RAISE MONEY TO HELP KIDS AT ST. JUDE. JUST LIKE THE NUMERATORS, YOU CAN USE MATH TO HELP FUND RESEARCH AND FIND CURES FOR KIDS. SO HELP THE NUMERATORS WHILE HELPING ST. JUDE. AND BEGIN YOUR OWN ADVENTURE TODAY!

Take the first step **today!**

It doesn't take much – just a few dollars and a little time.

Get the word out.

Go to **mathathon.org** and use the online tools to reach out to friends, family and neighbors and raise money to support your St. Jude Math-A-Thon® goals.

Do the math.

Complete the five worksheets in this Funbook by your school's deadline of _____.

Celebrate.

Tally the results of your efforts, and celebrate!

Image: megaphone icon, © iconoci/The Noun Project.

Make a difference with The St. Jude

MATH-A-THON

Families never receive a bill from St. Jude for treatment, travel, housing or food – because all a family should worry about is helping their child live.

St. Jude freely shares its discoveries so that one child saved at St. Jude means doctors and scientists can use that knowledge to save thousands more children.

The St. Jude Math-A-Thon is a math-enrichment fundraiser with a real-world purpose!

It helps students practice math skills while providing the opportunity to help kids just like them!

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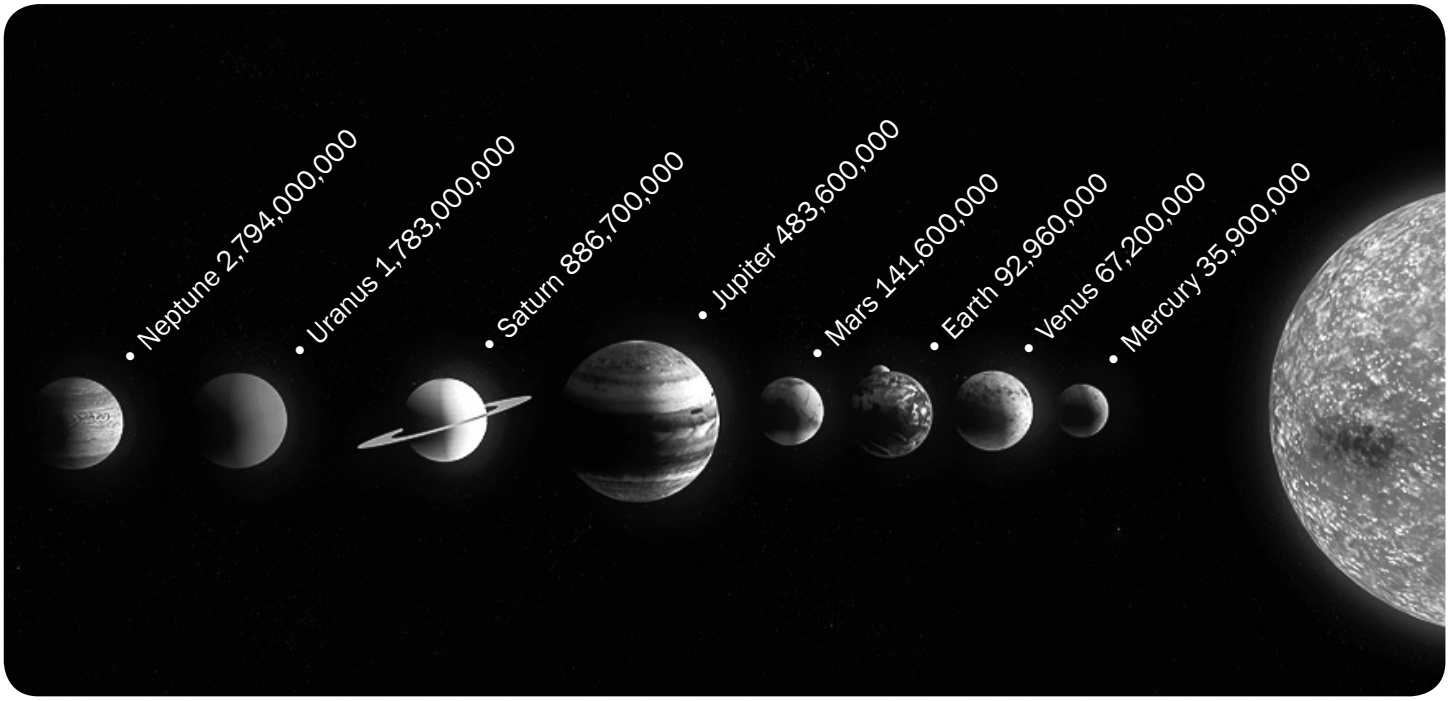
ST. JUDE
MATH-A-THON

The Solar System and the Sun: Far Out!

The Numerators® are flying into space to measure each planet's distance from the sun (in miles)! Read each number name below. Write the standard form of the number on each blank line. Then look at the chart to see how "far out" each planet is, and write each planet's name next to the correct answer.

1. Thirty-five million, nine hundred thousand miles	1. _____	_____
2. Eight hundred eighty-six million, seven hundred thousand miles	2. _____	_____
3. Ninety-two million, nine hundred sixty thousand miles	3. _____	_____
4. Two billion, seven hundred ninety-four million miles	4. _____	_____
5. Four hundred eighty-three million, six hundred thousand miles	5. _____	_____
6. Sixty-seven million, two hundred thousand miles	6. _____	_____
7. One billion, seven hundred eighty-three million miles	7. _____	_____
8. One hundred forty-one million, six hundred thousand miles	8. _____	_____



Spying on the Robots

The Numerators® are keeping an eye on the diabolical robots through their super-powered telescopes. Choose a number from the telescope lens to fill in each blank so that the result matches the answer shown. You must use all the numbers in each lens and may not use a number more than once. Note: Multiple ways of solving the problems are possible!

A.

____ + ____ x ____ + ____ = 24

B.

____ ÷ ____ x ____ − ____ = 20

C.

(____ + ____) − ____ x ____ = 4

D.

____ x ____ + ____ x ____ = 27

E.

____ − ____ x ____ ÷ ____ = 0

F.

(____ + ____) x ____ ÷ ____ = 20

G.

____ ÷ ____ x (____ + ____) = 30

H.

(____ − ____) x (____ ÷ ____) = 16

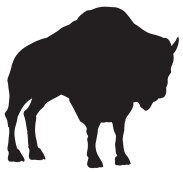
Top Ten:
Heaviest Land Animals

These beasts are heavy! Do the multiplication problems. Then write each animal's weight, in pounds, in the space provided. The first one is done for you.

Gorilla

1. 97
x 5
485

Weight: ***485 pounds***



Bison

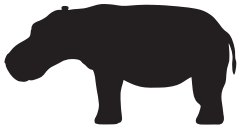
2. 147
x 9

Weight: _____

Camel

3. 60
x 11

Weight: _____



Hippopotamus

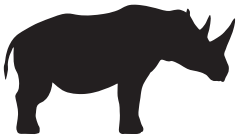
4. 43
x 40

Weight: _____

Tiger

5. 82
x 16

Weight: _____



Rhino

6. 49
x 45

Weight: _____

Grizzly Bear

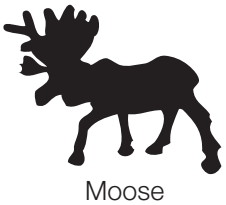
7. 294
x 15

Weight: _____

Giraffe

8. 4,409
x 2

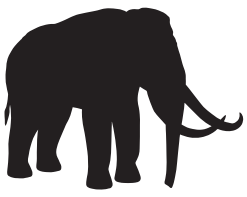
Weight: _____



Moose

9. 189
x 14

Weight: _____



African Elephant

10. 689
x 16

Weight: _____

Prehistoric Monument

Monuments are usually built to honor people. Not this one! At this Colorado monument, you can discover fragments of a world where the largest land creatures of all time once roamed! The first one is done for you.

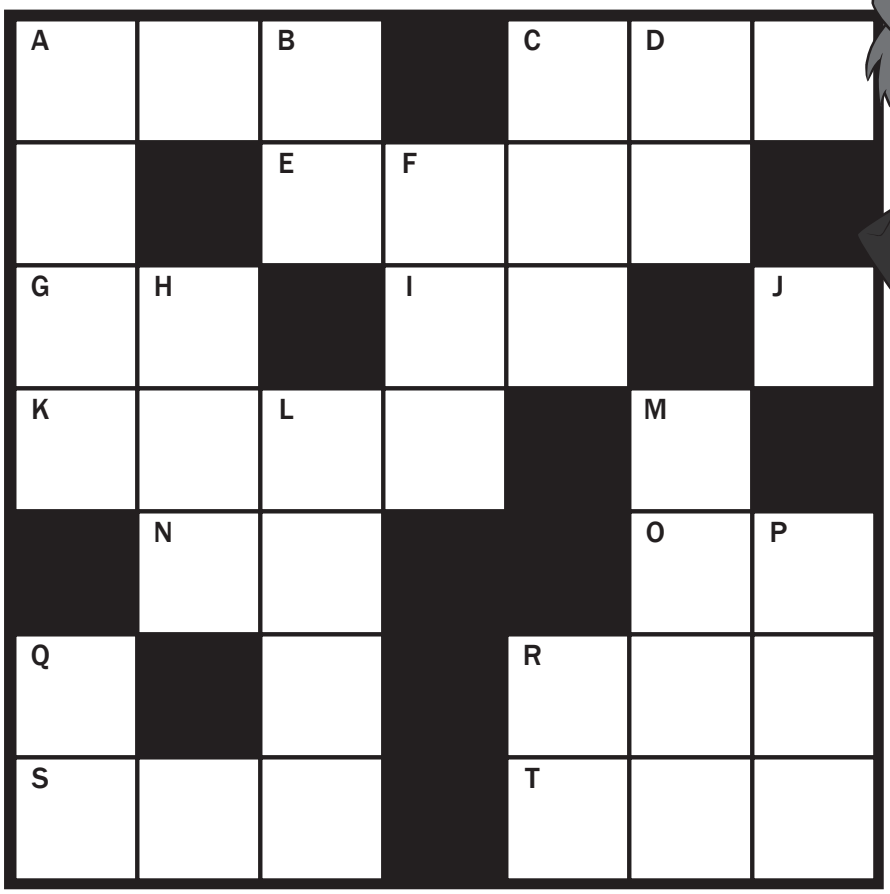
To learn the subject of this monument and the name of the city in which it is located, write the letter that appears beneath the problem that would *not* match the estimated quotient.

Estimated Quotient			
1. 5 D	27 ÷ 5 = 5.4 B	316 ÷ 58 = 5.448 C	426 ÷ 68 = 6.265 (D)
2. 8	24 ÷ 8 I	479 ÷ 59 A	6,432 ÷ 801 O
3. 9	90 ÷ 9 N	642 ÷ 71 G	8,080 ÷ 892 P
4. 70	850 ÷ 12 M	6,800 ÷ 97 N	1,626 ÷ 14 O
5. 40	198 ÷ 5 P	269 ÷ 7 R	501 ÷ 8 S
6. 60	3,000 ÷ 59 A	432 ÷ 7 B	5,427 ÷ 91 C
7. 20	61 ÷ 3 T	192 ÷ 17 U	6,042 ÷ 297 V
8. 80	1,234 ÷ 19 R	555 ÷ 7 S	4,912 ÷ 61 T

1	2	3	4	5	6	7	8

Crisscross Quotients

This puzzle is similar to a crossword puzzle. But instead of using letters to form words, you use digits to form numbers. Use the clues below to complete the puzzle.



ACROSS

A. 8,025 ÷ 25
C. 1,792 ÷ 2
E. 16,385 ÷ 5
G. 696 ÷ 58
I. 1,653 ÷ 87
J. The remainder in 52 ÷ 12
K. 49,428 ÷ 12
N. 2,226 ÷ 42
O. 282 ÷ 3
Q. The remainder in 3,821 ÷ 72
R. 3,320 ÷ 10
S. 23,616 ÷ 32
T. 32,886 ÷ 81

DOWN

A. 6,828 ÷ 2
B. The remainder in 9,645 ÷ 56
C. 1,758 ÷ 2
D. 8,148 ÷ 84
F. 10,293 ÷ 47
H. 1,075 ÷ 5
L. 10,944 ÷ 8
M. 15,720 ÷ 4
P. 17,040 ÷ 40
Q. 1,881 ÷ 33
R. The remainder in 1,618 ÷ 36

LEVEL 5
FUNBOOK

Answers:

Page 6:
The Solar System and the Sun: Far Out!
1. 35,900,000 miles; Mercury
2. 886,700,000 miles; Saturn
3. 92,960,000 miles; Earth
4. 2,794,000,000 miles; Neptune
5. 483,600,000 miles; Jupiter
6. 67,200,000 miles; Venus
7. 1,783,000,000 miles; Uranus
8. 141,600,000 miles; Mars

Page 7:
Spying on the Robots
Possible accept all valid solutions that use the four digits bgiven and the correct order of operations.
Possible answers include:
A. 4 + 3 x 5 + 5 = 24
B. 8 ÷ 1 x 3 – 4 = 20
C. (8 + 6) – 2 x 5 = 4
D. 3 x 3 + 6 x 3 = 27
E. 3 – 6 x 2 ÷ 4 = 0
F. (6 + 2) x 5 ÷ 2 = 20
G. 9 ÷ 3 x (7 + 3) = 30
H. (9 – 5) x (8 ÷ 2) = 16

Page 8:
Top Ten: Heaviest Land Animals
1. 485 pounds
2. 1,323 pounds
3. 660 pounds
4. 1,720 pounds
5. 1,312 pounds
6. 2,205 pounds
7. 4,410 pounds
8. 8,818 pounds
9. 2,646 pounds
10. 11,024 pounds

Page 9:
Prehistoric Monument
1. D 426 ÷ 68 ≈ 6
2. I 24 ÷ 8 = 3
3. N 90 ÷ 9 = 10
4. O 1,626 ÷ 14 ≈ 120
5. S 501 ÷ 8 ≈ 60
6. A 3,000 ÷ 59 ≈ 50
7. U 192 ÷ 17 ≈ 10
8. R 1,234 ÷ 19 ≈ 60

Page 10: Crisscross Quotients

A 3	2	B 1		C 8	D 9	6
4		E 3	F 2	7	7	
G 1	H 2		I 1	9		J 4
K 4	1	L 1	9		M 3	
	N 5	3			O 9	P 4
Q 5		6		R 3	3	2
S 7	3	8		T 4	0	6

Check out the St. Jude Math-A-Thon® Fundraising Hub!

mathathon.org

Take your fundraising efforts to the next level! Packed with tools to help you manage your fundraising efforts, raise more money and save time, **mathathon.org** includes tools to help you:

- ☐ Create your web page and set your goal
- ☐ Accept online donations
- ☐ Track your fundraising progress
- ☐ Customize emails to request donations and thank sponsors
- ☐ Spread the word about your event through social networks

Remember, because of you, the St. Jude Math-A-Thon can continue to raise money to help St. Jude find cures and save children.

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ALSAC • Danny Thomas, Founder
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ST. JUDE *MATH-A-THON*

mathathon.org | mathathon@stjude.org | #stjudemathathon | 1-800-386-2665

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