St. Jude
MATH-A-THON

St. Jude patient
Kiara

LEVEL 4
FUNBOOK

St. Jude Children's® Research Hospital

St. Jude
Math-A-Thon

Welcome to the St. Jude Math-A-Thon!

Thank you for supporting St. Jude Children's Research Hospital®. Because of fundraising programs like St. Jude Math-A-Thon and supporters like you, St. Jude is leading the way the world understands, treats and defeats childhood cancer and other life-threatening diseases. You're an important part of making this fundraiser a success and participation is easy:

1 Raise money online using the tools available at **stjude.org/math**

2 Complete the math worksheets in this workbook

3 Earn cool prizes!

Meet Kiara

Kiara was 8 years old when she began to experience severe headaches that caused her to pass out in her classroom in August 2023. A CT scan later revealed a brain tumor found to be medulloblastoma. Kiara underwent surgery to remove the tumor. She was then referred to St. Jude where she received proton radiation therapy followed by chemotherapy.

"St. Jude has not only been taking care of my daughter's physical treatment but is also making sure she is mentally and emotionally taken care of as well," said her mom, Neha. "They are also taking care of the family. Everyone goes above and beyond to take care of everyone going through this kind of cancer journey."

At St. Jude, Kiara likes to draw. She has also learned to sew and has sewn pillows and plush toys.

How Math Helps St. Jude

Math is used every day on the St. Jude campus. From careful measurements for patient medicine to the complex mathematics needed in our state-of-the-art research facilities, numbers play an important role in helping our patients. As you complete each worksheet, know that you're sharpening important skills that are used every day to help the kids of St. Jude.

- St. Jude grows its own fresh fruits and vegetables so patients can eat delicious and nutritious food. Math is used every day in making sure each plant gets the right amount of water.

- Doctors use careful math to make sure each child gets the right amount of medicine each day.

- St. Jude is not a general children's hospital. We focus on providing high-quality care to children with cancer and other life-threatening diseases. The people who work at St. Jude use math to keep careful track of how many patients we have on campus and how many rooms we have available.

Ready to Sign Up?

St. Jude relies on the power in numbers. Math plays a vital role in nearly every aspect of our campus, but the strength in numbers is never more powerful than when it helps our patients. That's where you come in — turn to the back page of your funbook to start the sign-up process. You can even have your parents scan the QR code and sign up online.
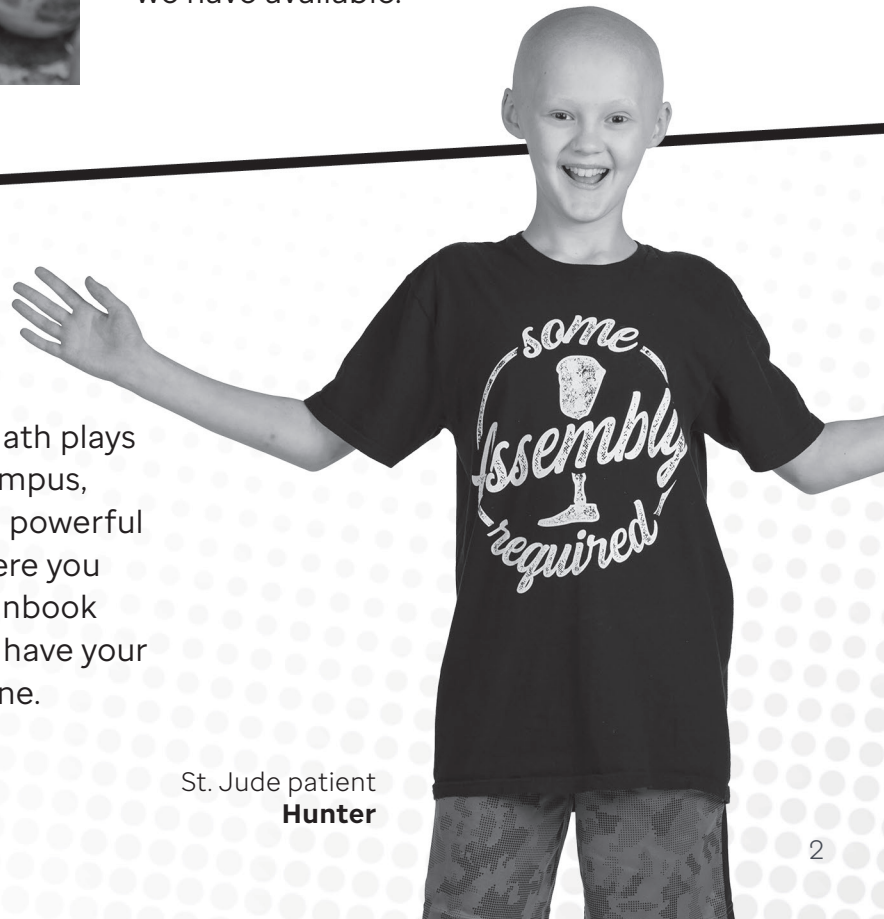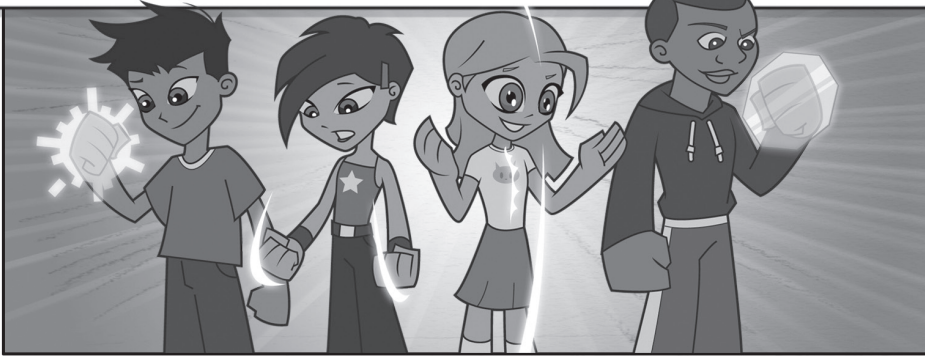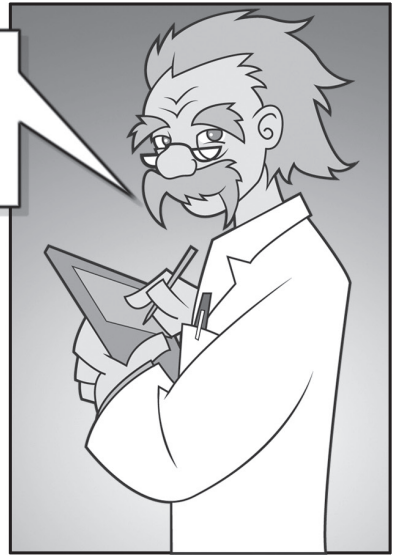
St. Jude patient
Hunter

MEET THE NUMERATORS

My name is Dr. Jax. Once there were four regular kids who studied math in school, just like you. I helped them turn their math skills into amazing superpowers. Now, these students call themselves The Numerators. They use their powers to protect other kids in danger.

That's why The Numerators used their math powers to help St. Jude. They were helping to raise money to find cures for very sick children with diseases like cancer.
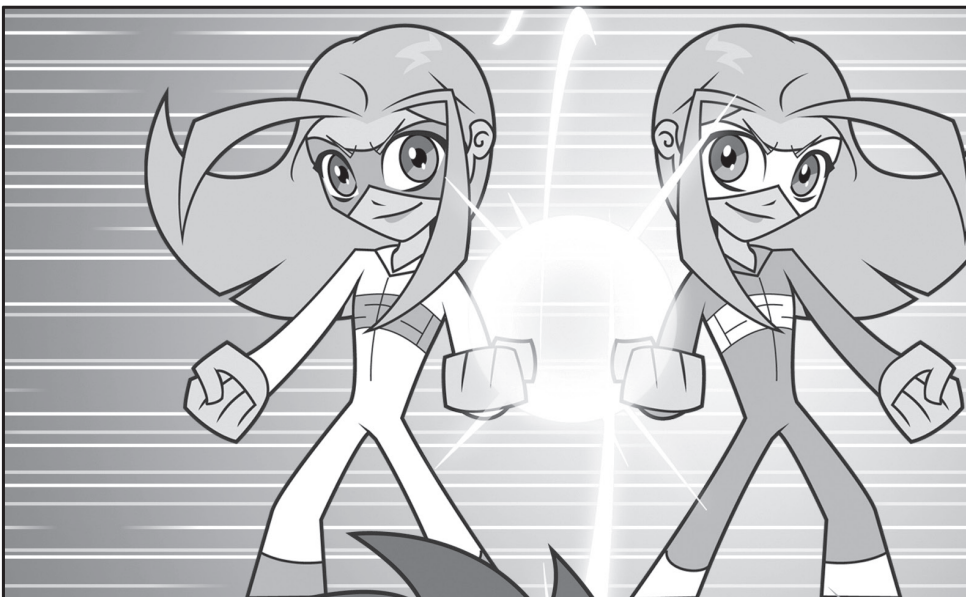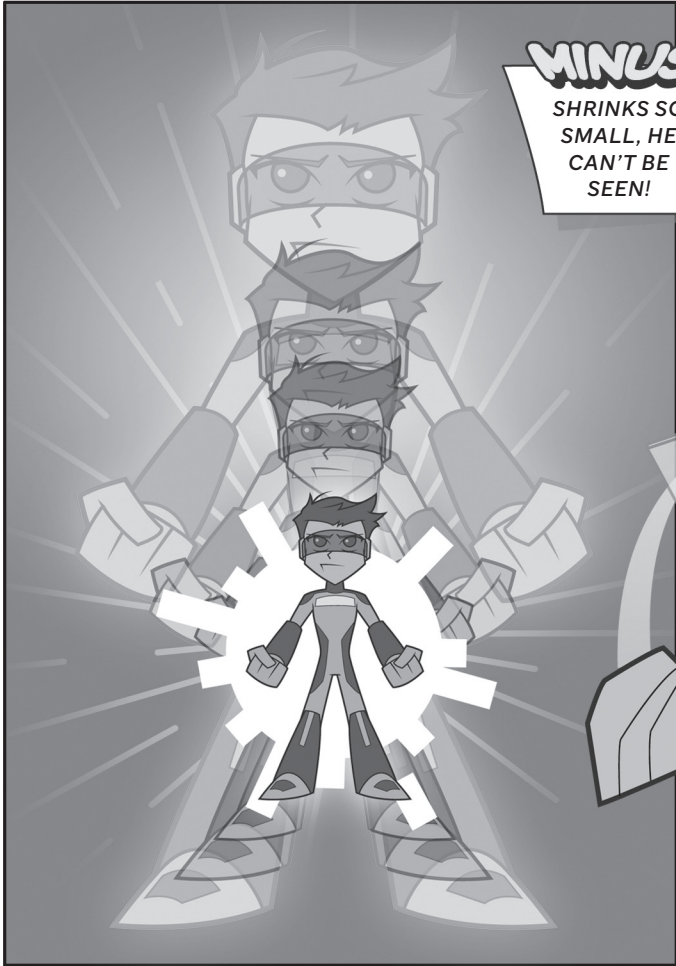
SYMMETRY
SPLITS INTO EQUAL PARTS FOR A DOUBLE ATTACK!

FRACTION
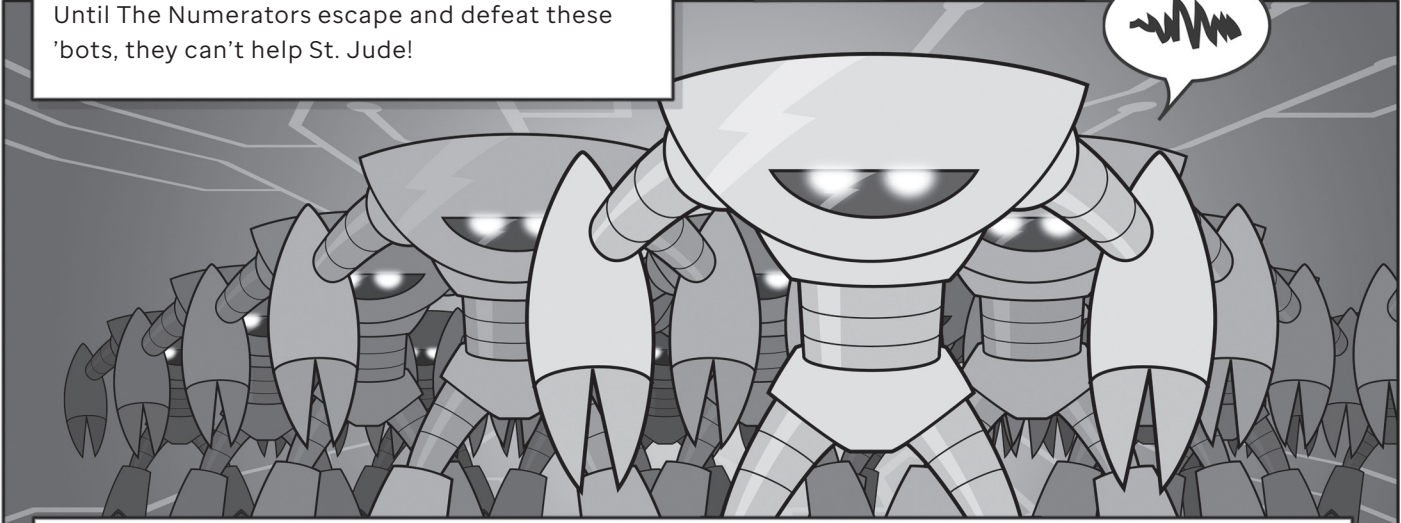*FIGHTS WITH A POWERFUL SLASH!*

MINUS

SHRINKS SO SMALL, HE CAN'T BE SEEN!

OCTAGON

KEEPS ENEMIES AWAY WITH AN EIGHT-SIDED FORCE FIELD!

But robots launched a surprise attack on our heroes. The robots wanted to steal The Numerators' math powers for their own purposes. Until The Numerators escape and defeat these 'bots, they can't help St. Jude!
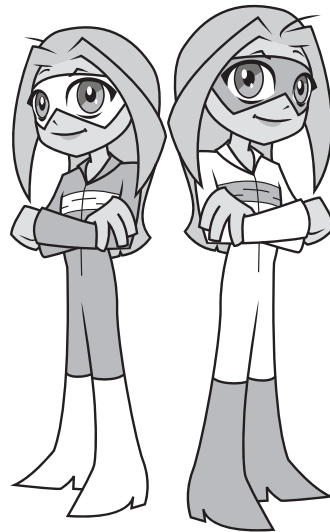
You can use your own math skills to help The Numerators and the kids of St. Jude. Just fill out this St. Jude Math-A-Thon funbook to help our heroes escape the robots. You'll also help raise money for St. Jude at the same time. So get your pencils ready and start your math adventure today!

Word Power

Dr. Jax has set up a series of challenges to make sure The Numerators are ready to face the droids. Complete the chart to find each letter's value. Add the values for each three-letter "action" word below.

Letter	Expression	Value
B	45 ÷ 9	
A	16 ÷ 8	
Z	48 ÷ 6	
O	8 x 8	
P	56 ÷ 8	
M	7 x 7	
W	9 x 6	

POW

____ (P)

+ ____ (O)

+ ____ (W)

= ____

BAM

____ (B)

+ ____ (A)

+ ____ (M)

= ____

BOP

____ (B)

+ ____ (O)

+ ____ (P)

= ____

ZAP

____ (Z)

+ ____ (A)

+ ____ (P)

= ____

Hide and Seek

The Numerators have spotted droids hiding in different locations around their school. To capture them, they must determine the total number of droids in each hideout. Use your multiplication skills to help The Numerators catch all the droids. Circle the greatest number in each row. Write that number on the line to see who catches the most.

Minus

1. 867
    x   7

2. 428
    x   8

3. 2,618
    x   4

_____ droids

Fraction

4. 961
    x   6

5. 809
    x   7

6. 1,816
    x   3

_____ droids

Octagon

7. 485
    x   7

8. 3,456
    x   3

9. 1,324
    x   4

_____ droids

Symmetry

10. 3,295
     x   2

11. 5,087
     x   2

12. 3,077
     x   5

_____ droids

13. Who caught the most droids?

_____

Shield Surge

The Numerators are racing against time to stop the droids from stealing their powers. They need to compare the energy levels of their shields. Help them by determining if the numbers are greater than, less than or equal to in each other.

1. 94,017 ◯ 83,256	greater than >	equal to =	less than <
2. 250,212 ◯ 250,122	greater than >	equal to =	less than <
3. 321,870 ◯ 658,467	greater than >	equal to =	less than <
4. 1,638,902 ◯ 1,638,902	greater than >	equal to =	less than <
5. 4,462,212 ◯ 4,642,356	greater than >	equal to =	less than <

Counting Droids

The droids are trying to overwhelm The Numerators by attacking from multiple directions. The Numerators need to know the size of each droid army. Calculate the total number of droids in each group. Your math skills will help The Numerators defend against the droids!

1. 100,000 + 50,000 + 8,000 + 600 + 40 + 8

    Total: _____

2. 500,000 + 8,000 + 400 + 1

    Total: _____

3. Two hundred forty-eight thousand, eight hundred seventy-four

    Total: _____

4. Five hundred four thousand, one hundred forty-three

    Total: _____

5. Fifty-eight thousand, five hundred thirteen

    Total: _____

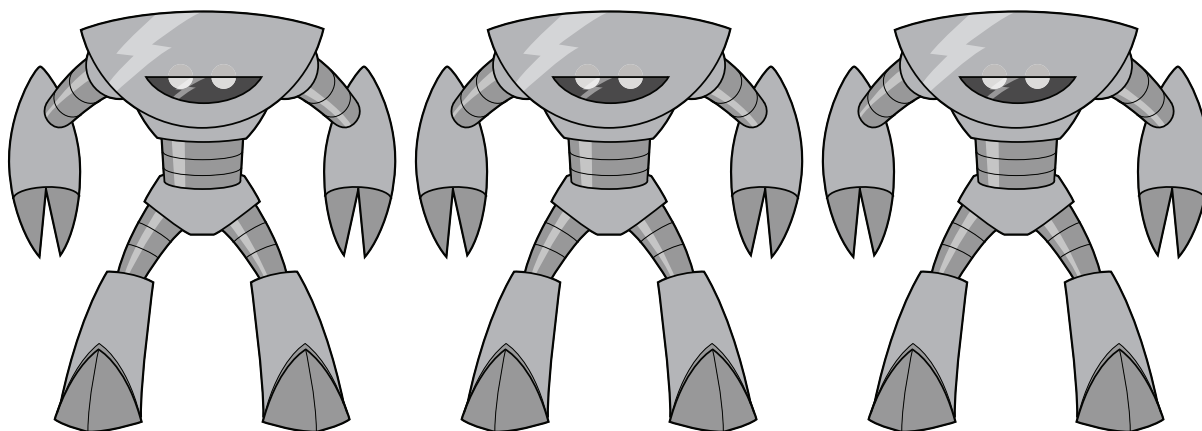6. Thirty-five thousand, seven hundred eighty-two

    Total: _____

7. 900,000 + 2,000 + 300 + 7

    Total: _____

8. 300,000 + 90,000 + 5,000 + 700 + 20 + 9

    Total: _____

Fraction Fixer

The Numerators have encountered a group of droids that have scrambled their communication signals. To restore their connection, they need to simplify the fractions in their code. Help The Numerators by simplifying each fraction to correct the signals.

1. $\dfrac{4}{8}$ = _____	**2.** $\dfrac{6}{9}$ = _____	**3.** $\dfrac{10}{15}$ = _____
4. $\dfrac{12}{16}$ = _____	**5.** $\dfrac{9}{12}$ = _____	**6.** $\dfrac{14}{21}$ = _____
7. $\dfrac{8}{10}$ = _____	**8.** $\dfrac{15}{20}$ = _____	**9.** $\dfrac{18}{24}$ = _____
10. $\dfrac{20}{25}$ = _____	**11.** $\dfrac{16}{24}$ = _____	**12.** $\dfrac{25}{35}$ = _____
13. $\dfrac{28}{42}$ = _____	**14.** $\dfrac{32}{48}$ = _____	**15.** $\dfrac{36}{54}$ = _____

Multiply Mission

The Numerators have discovered the droids' command center. To deactivate the droids, they need to know how many are stored in each section. Use your multiplication skills to find the total number of droids in each section. Use your answers to find the code to shut the command center down and stop the droids for good.

1. 10 rows x 14 droids in each row _____ total droids **K**	2. 25 rows x 24 droids in each row _____ total droids **T**
3. 38 rows x 16 droids in each row _____ total droids **A**	4. 82 rows x 63 droids in each row _____ total droids **E**
5. 46 rows x 37 droids in each row _____ total droids **R**	6. 79 rows x 59 droids in each row _____ total droids **H**
7. 99 rows x 80 droids in each row _____ total droids **I**	8. 2 rows x 25 droids in each row _____ total droids **L**
9. 51 rows x 42 droids in each row _____ total droids **M**	10. 68 rows x 70 droids in each row _____ total droids **S**

_____   _____   _____   _____   _____   _____   _____   _____   _____   _____

2,142   608   600   4,661   4,760   140   7,920   50   50   4,760

Check out **stjude.org/math** to start fundraising online today!

Packed with tools to help you manage your fundraising efforts, raise more money and save time, **stjude.org/math** includes tools to help you:

- Find your school

- Create your own fundraising webpage and set your goal

- Accept online donations

- Integrate with Facebook fundraising

Scan to find your school and sign up!

St. Jude patient
Mondreas

LEVEL 4
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