

# Exponent Properties

**Newton**  
1642 - 1727



$$\frac{1}{a^{12}b^4}$$

**Leibniz**  
1646 - 1716



$$2u^2v^4$$

# Scavenger Hunt Game

# **Thank you! Thank you!**

Thank you for your purchase. Please let me know if you have any trouble with the resource. I value any feedback from you and enjoy hearing about how you use the scavenger hunt in your classroom.

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# Exponent Properties Scavenger Hunt Game

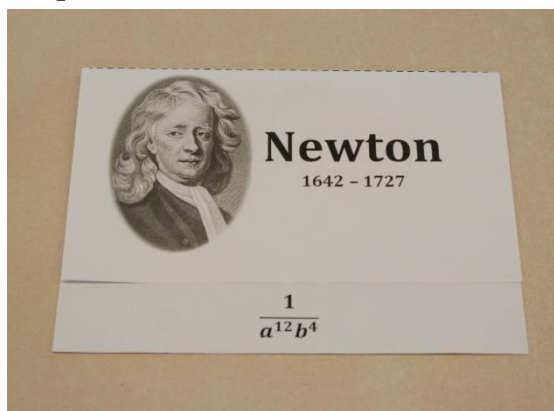
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## Materials Included

- Directions
- Teacher's Key
- Student Worksheet
- Scavenger Hunt Problems

## Teacher Preparation

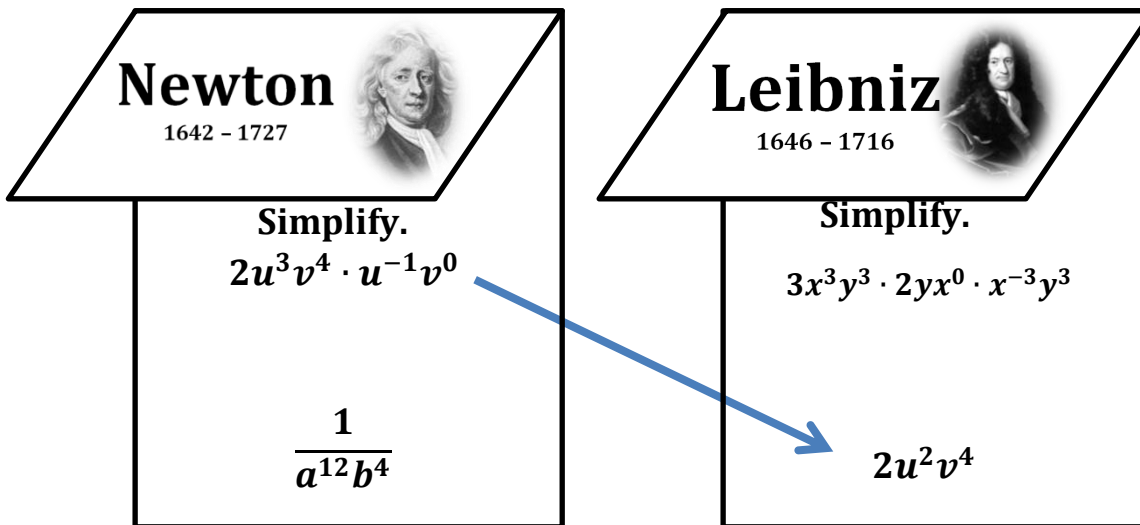
1. Print teacher's key and student worksheet (pages 6 - 8).
2. Make copies of the student worksheet for every student in your class.
3. Print the scavenger hunt problems (pages 9-40). **The scavenger hunt problems must be printed double-sided (page 9 is printed on the back of page 10, etc.).** You may have to manually print on both sides or you may have to use a duplex setting on the printer.
4. Fold the scavenger hunt problems on the dotted line like the picture below.



5. Tape the scavenger hunt problems around the classroom making sure that students are able to reach them.

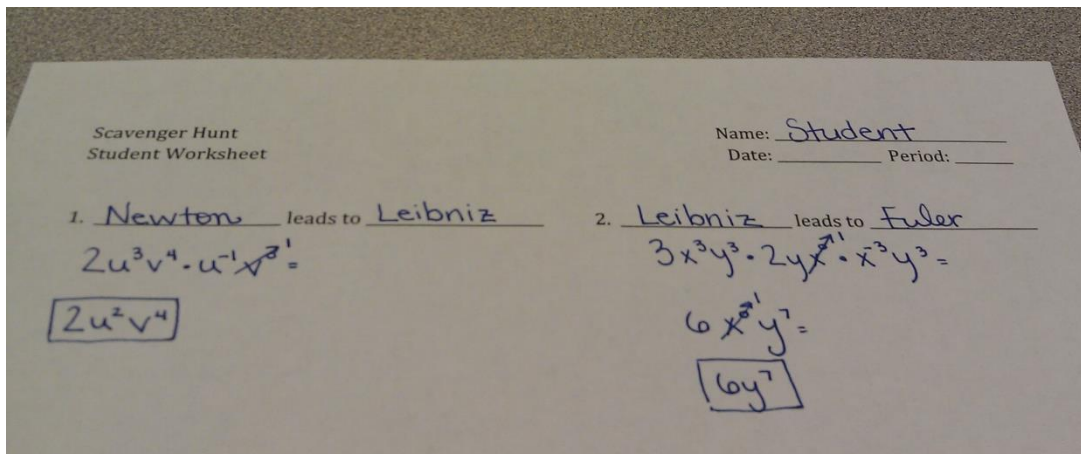
## Getting Students Started

1. Pass out the student worksheets.
2. The first few times I do a scavenger hunt with a class I work through one scavenger hunt problem with the class. If possible, project the student worksheet on the SMART Board or document camera. You can find a free video of how I introduce the directions to my students at <https://www.teacherspayteachers.com/Product/Explaining-Scavenger-Hunts-to-Students-3967726>. Feel free to use this video in your classroom.
  - Students will start at a scavenger hunt problem by writing down the mathematician on the outside flap.
  - Students will then open the flap and write down the problem on the inside.
  - Students will find the answer to the problem on their worksheet.
  - Students will then search for the answer on the bottom of another scavenger hunt problem around the classroom. Students will write down the mathematician once they've found it and repeat the process.



- Students will know that they are finished when they loop back around to the scavenger hunt problem they started with.

## Example Student Worksheet:



All mathematician images are public domain images found using Wikimedia Commons.

## **Scavenger Hunt Teacher Key**

Newton leads to Leibniz

Leibniz leads to Euler

Euler leads to Euclid

Euclid leads to Abel

Abel leads to Fibonacci

Fibonacci leads to Pythagoras

Pythagoras leads to Gauss

Gauss leads to Archimedes

Archimedes leads to Riemann

Riemann leads to Fermat

Fermat leads to Hilbert

Hilbert leads to Cantor

Cantor leads to Pascal

Pascal leads to Jacobi

Jacobi leads to Hamilton

Hamilton leads to Newton (go to top of page)

Students will be starting in different places for the scavenger hunt. To use this key, you must find where the student started and go from there.

Scavenger Hunt  
Student Worksheet

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Period: \_\_\_\_\_

1. \_\_\_\_\_ leads to \_\_\_\_\_

2. \_\_\_\_\_ leads to \_\_\_\_\_

3. \_\_\_\_\_ leads to \_\_\_\_\_

4. \_\_\_\_\_ leads to \_\_\_\_\_

5. \_\_\_\_\_ leads to \_\_\_\_\_

6. \_\_\_\_\_ leads to \_\_\_\_\_

7. \_\_\_\_\_ leads to \_\_\_\_\_

8. \_\_\_\_\_ leads to \_\_\_\_\_

9. \_\_\_\_\_ leads to \_\_\_\_\_

10. \_\_\_\_\_ leads to \_\_\_\_\_

11. \_\_\_\_\_ leads to \_\_\_\_\_

12. \_\_\_\_\_ leads to \_\_\_\_\_

13. \_\_\_\_\_ leads to \_\_\_\_\_

14. \_\_\_\_\_ leads to \_\_\_\_\_

15. \_\_\_\_\_ leads to \_\_\_\_\_

16. \_\_\_\_\_ leads to \_\_\_\_\_





1642 - 1727

**Newton**



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**Simplify.**

$$2u^3v^4 \cdot u^{-1}v^0$$

$$\frac{1}{a^{12}b^4}$$

1646 - 1716

# Leibniz



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**Simplify.**

$$3x^3y^3 \cdot 2yx^0 \cdot x^{-3}y^3$$

$$2u^2v^4$$



1707 - 1783

**Euler**

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**Simplify.**

$$(3x^3)^{-3}$$

$$6y^7$$

Around 300 BCE

# Euclid



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**Simplify.**

$$(4x^3y^3)^3$$

$$\frac{1}{27x^9}$$



1802 - 1829

**Abel**



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**Simplify.**

$$(2ab^2)^3$$

$$64x^9y^9$$



1170 - 1250

# Fibonacci



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**Simplify.**

$$\frac{12x^2y^{-2}}{24x^4y^{-4}}$$

$$8a^3b^6$$

# Pythagoras

570 BCE - 495 BCE



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**Simplify.**

$$\frac{4x^4y^3}{4x^2y^4}$$

$$\frac{y^2}{2x^2}$$

1777 - 1855  
**Gauss**



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**Simplify.**

$$(x^4 y^4 \cdot y x^3)^4$$

$$\frac{x^2}{y}$$





287 BCE - 212 BCE

# Archimedes



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**Simplify.**

$$(y^4 \cdot 2x)^{-1}$$

$$x^{28}y^{20}$$



1826 - 1866

# Riemann



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**Simplify.**

$$(xy^0)^4 \cdot 2y^4$$

$$\frac{1}{2y^4x}$$

1601 - 1665

# Fermat



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**Simplify.**

$$\frac{3x^4y^{-3}}{x^{-1}y^3 \cdot x^0y^{-3}}$$

$$2x^4y^4$$

1862 - 1943

# Hilbert



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**Simplify.**

$$\frac{5u^{-1}}{2v^3 \cdot 5u^4v^0}$$

$$\frac{3x^5}{y^3}$$



1845 - 1918

# Cantor



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**Simplify.**

$$\frac{2x^2y^2}{yx^3 \cdot 2y}$$

$$\frac{1}{2u^5v^3}$$



1623 - 1662

**Pascal**

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**Simplify.**

$$\frac{(2x^3y^3)^4}{y}$$

$$\frac{1}{x}$$

**Jacobi**  
1804 - 1851



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**Simplify.**

$$\left(\frac{2x^2y^2}{xy^0}\right)^4$$

$$16x^{12}y^{11}$$

1805 - 1865

# Hamilton



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**Simplify.**

$$\left(\frac{a^3}{b^{-1}}\right)^{-4}$$

$$16x^4y^8$$