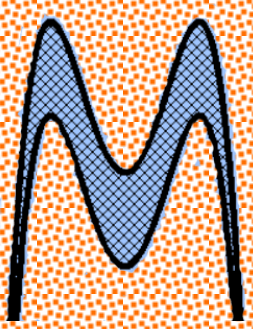
Solving Radical Equations Scavenger Hunt Game



ath with Tyrrell

Solving Radical Equations Scavenger Hunt Game

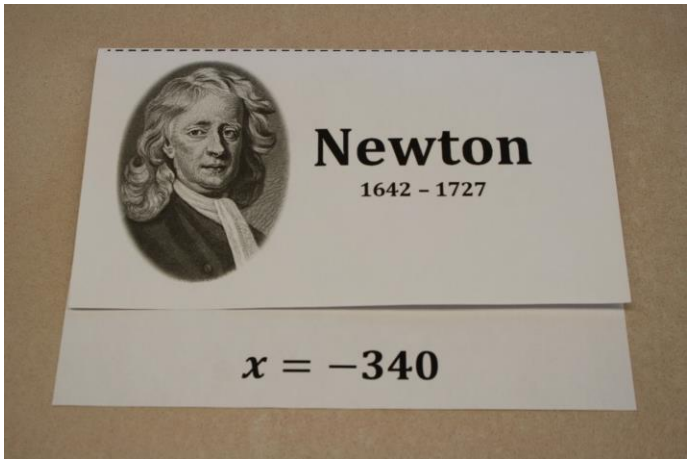
Math with Tyrrell

Materials Included

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

Teacher Preparation

1. Print teacher's key and student worksheet (pages 4 - 6).
2. Make copies of the student worksheet for every student in your class.
3. Print the scavenger hunt problems (pages 7-36). **The scavenger hunt problems must be printed double-sided (page 7 is printed on the back of page 8, 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.

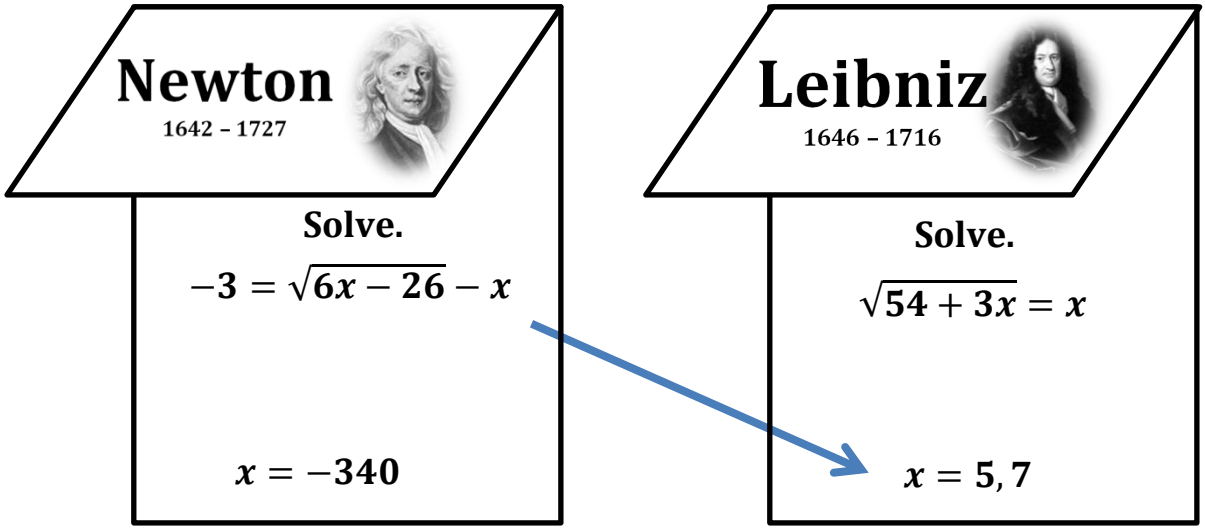


5. Tape the scavenger hunt problems around the classroom making sure that students are able to reach them.

Getting Students Started

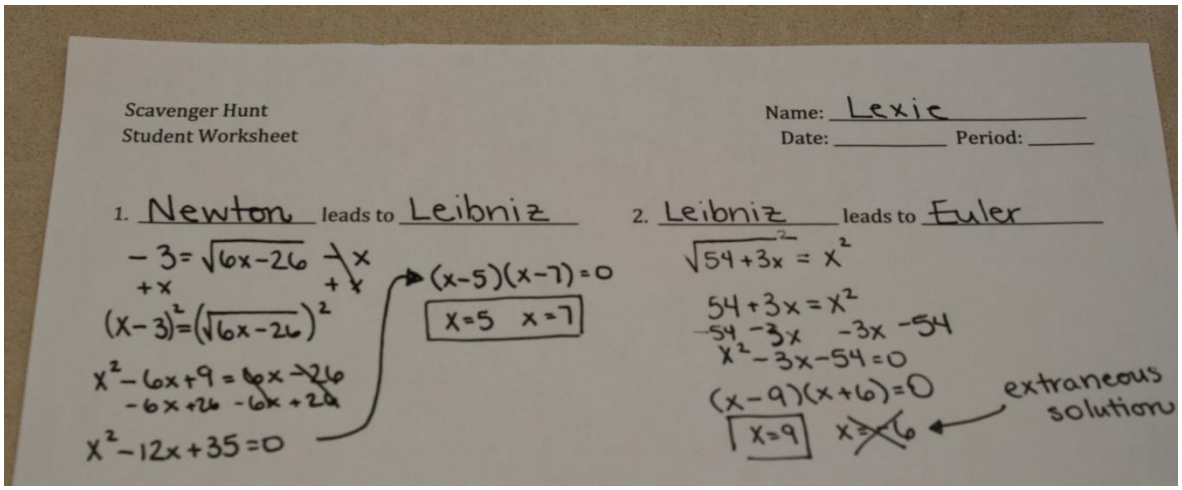
1. Pass out the student worksheets.
2. The first few times I do a scavenger hunt with a class I work through one scavenger hunt problem with the class. If possible, project the student worksheet on the SMART Board or document camera.
3. Students will start at a scavenger hunt problem by writing down the mathematician on the outside flap.
4. Students will then open the flap and write down the problem on the inside.
5. Students will find the answer to the problem on their worksheet.

6. 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.



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

Example Student Worksheet:



I hope that you and your students enjoy the scavenger hunt game. If you ever have any questions, please let me know. I am always looking for ways to improve so please leave your feedback and rating. Thank you!

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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 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 _____

Newton

1642 – 1727

Solve

$$-3 = \sqrt{6x - 26} - x$$

$$x = -340$$

Leibniz

1646 – 1716

Solve

$$\sqrt{54 + 3x} = x$$

$$x = 5, 7$$

Euler

1707 – 1783

Solve

$$\sqrt{\frac{x}{8}} + 6 = 4$$

$$x = 9$$

Euclid

Around 300 BCE

Solve

$$\sqrt[4]{10 - x} = \sqrt[4]{x - 4}$$

No Solution

Abel

1802 – 1829

Solve

$$\mathbf{56 = 7\sqrt{x - 10}}$$

$$\boldsymbol{x = 7}$$

Fibonnacci

1170 – 1250

Solve

$$\sqrt[3]{-3-x}=1$$

$$x=74$$

Gauss

1777 – 1855

Solve

$$\sqrt[5]{3x-7} = \sqrt[5]{x+3}$$

$$x = -4$$

Archimedes

287 BCE – 212 BCE

Solve

$$\sqrt{-72 + 17x} = x$$

$$x = 5$$

Riemann

1826 – 1866

Solve

$$x = 6 + \sqrt{4x - 28}$$

$$x = 8, 9$$

Fermat

1601 – 1665

Solve

$$8\sqrt{2x-6}+4=68$$

$$x=8$$

Hilbert

1862 – 1943

Solve

$$\sqrt[100]{-1-11x} = \sqrt[100]{2x+12}$$

$$x = 35$$

Cantor

1845 – 1918

Solve

$$\sqrt{29 - 5x} = x - 1$$

$$x = -1$$

Pascal

1623 – 1662

Solve

$$5\sqrt[3]{4x} - 2 = 18$$

$$x = 4$$

Jacobi

1804 – 1851

Solve

$$\sqrt[3]{x} = 9$$

$$x = 16$$

Hamilton

1805 – 1865

Solve

$$10\sqrt[5]{4-3x}=40$$

$$x=729$$