Algebra Pinball

Jump to the Algebra Pinball Table

What is Algebra Pinball?

Algebra Pinball is a collection of 100 algebra and pre-algebra exercises with an option to time yourself. Master foundational algebra skills, and have fun!

Algebra Pinball is Part of a Complete Algebra Course

Algebra Pinball is part of a a *complete* Algebra 1 course: One Mathematical Cat, Please! A First Course in Algebra. The *complete* course has over 175 lessons: totally free, sequenced, no logins, no ads, no distractions from the math. It can be used for a year-long high school course. It has unlimited randomly-generated online *and* offline practice in *every* lesson.

How to Use Algebra Pinball

1. **SAVE** this pdf. Why? Each title in the Algebra Pinball Table (like 'Expressions versus Sentences') is a link to an Algebra Pinball lesson.

   Don't like following links from a pdf? Then cut-and-paste this URL into your browser for a web-based version of the Algebra Pinball Table:

   `https://www.onemathematicalcat.org/AlgebraPinball_TPT.htm`

2. **PRINT** this pdf. Why? You'll be hand-writing in your *own* times on the printed version of the Algebra Pinball Table.

3. **LEARN to use the exercises:**

   - Click on the first lesson in the Algebra Pinball Table (Expressions versus Sentences). Read this short lesson. Or—if you want—click the audio icon next to the title and follow along with the highlighted text as I read it to you!
   - Click the question mark next to 'Practice'—it's a short video. It gives tips on using the exercises. This video is *only* in the first lesson, since the entire course works the same way.
   - Practice a bit, and then time yourself.
   - Record your first Algebra Pinball time on your printed version of the Algebra Pinball Table!

History of Algebra Pinball

Algebra Pinball started in my days teaching at Miss Hall's School. I remember watching my students trying to beat a really fast time—their fingers were flying! It made me think of someone using a pinball machine, and thus was born 'Algebra Pinball'.

Algebra Pinball can be used in many different ways! Use it just for yourself: chart progress towards mastery by increasingly faster times. Or, make it social with a family or classroom competition. No matter *how* it's used, algebra skills will get better and better!

Explore

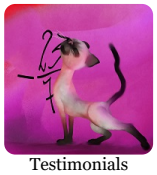
Every time you visit one of my online lessons, a random 'mathematical cat' appears to welcome you! Some of these cats appear on the first page of the Algebra Pinball Table. Each cat is a link—they can help you get started exploring my web site. Enjoy!

Algebra Pinball Table

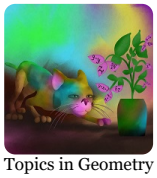

My resume

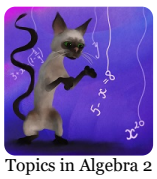

My teaching philosophy


Fun facts about me


Testimonials


Want to put math on the web?


Topics in Geometry


Topics in Algebra 2


Precalculus

Row #	Algebra Pinball Exercise	Use these columns to record your times!	
1	Expressions versus Sentences		
2	Basic Addition Practice		
3	Multiplication		
4	Divisibility		
5	Mixed Basic Add/Subtract Multiply/Divide Practice		
6	Deciding if a Number is a Whole Number, an Integer, etc.		
7	Addition of Signed Numbers		
8	Subtraction of Signed Numbers		
9	Mixed Addition and Subtraction of Signed Numbers		
10	Writing Fractions with a Denominator of 2 in Decimal Form		
11	Average of Two Signed Numbers		
12	Average of Three Signed Numbers		
13	Identifying Place Values		
14	Multiplying by Powers of Ten		
15	Changing Decimals to Fractions		
16	Multiplying and Dividing Decimals by Powers of Ten		
17	Changing Decimals to Percents		
18	Changing Percents to Decimals		
19	Interval and List Notation		
20	Reading Set Notation		
21	Solving Simple Sentences By Inspection		
22	Using Mathematical Conventions		
23	Rewriting Fractions as a Whole Number Plus a Fraction		
24	Locating Fractions on a Number Line		


Calculus


Math cat gallery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Custom Algebra Pinball Tables


Choose your own names to make story problems hilarious!


Pebble, our tiny home


Cat-in-Hammock book (algebra + language of math)


Cat-on-Swing book (language of math)

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25	Fractions Involving Zero		
26	Finding Reciprocals		
27	Determining if a Product is Positive or Negative		
28	Multiplying and Dividing Fractions		
29	Practice with the Form $a(b/c)$		
30	More Practice with the Form $a(b/c)$		
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32	Finding Least Common Multiples		
33	Renaming Fractions with a Specified Denominator		
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35	Adding and Subtracting Fractions		
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40	Practice with the Phrases "at least" and "at most"		
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45	Deciding if a Fraction is a Finite or Infinite Repeating Decimal		
46	Deciding if Numbers are Equal or Approximately Equal		
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48	Classifying Units as Length, Time, Volume, Weight/Mass		
49	Practice with Unit Abbreviations		
50	Practice with Unit Names		
51	Practice with Unit Conversion Information		
52	One-Step Conversions		

Row #	Algebra Pinball Exercise		
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54	Practice with Order of Operations		
55	Taking PEMDAS Too Literally: Don't Make This Mistake!		
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58	Practice with $(x^m)^n = x^{mn}$		
59	Practice with $\frac{x^m}{x^n} = x^{m-n}$		
60	Practice with $x^{-p} = \frac{1}{x^p}$		
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62	Multi-Step Exponent Law Practice		
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66	Practice with x and $-x$		
67	Practice with Products of Signed Variables		
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72	Writing Expressions in the Form kx^n		
73	Writing More Complicated Expressions in the Form kx^n		
74	Writing Quite Complicated Expressions in the Form kx^n		
75	Identifying Variable Parts and Coefficients of Terms		
76	Combining Like Terms		
77	Simplifying Expressions Like $-a(3b - 2c - d)$		
78	Basic FOIL		

Row #	Algebra Pinball Exercise		
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82	Practice with the Mathematical Words **and**, **or**, and **is equivalent to**		
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