MATH

Math Manipulatives Mania!

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Instructional Platform

Instructional Delivery

Instructional Strategies

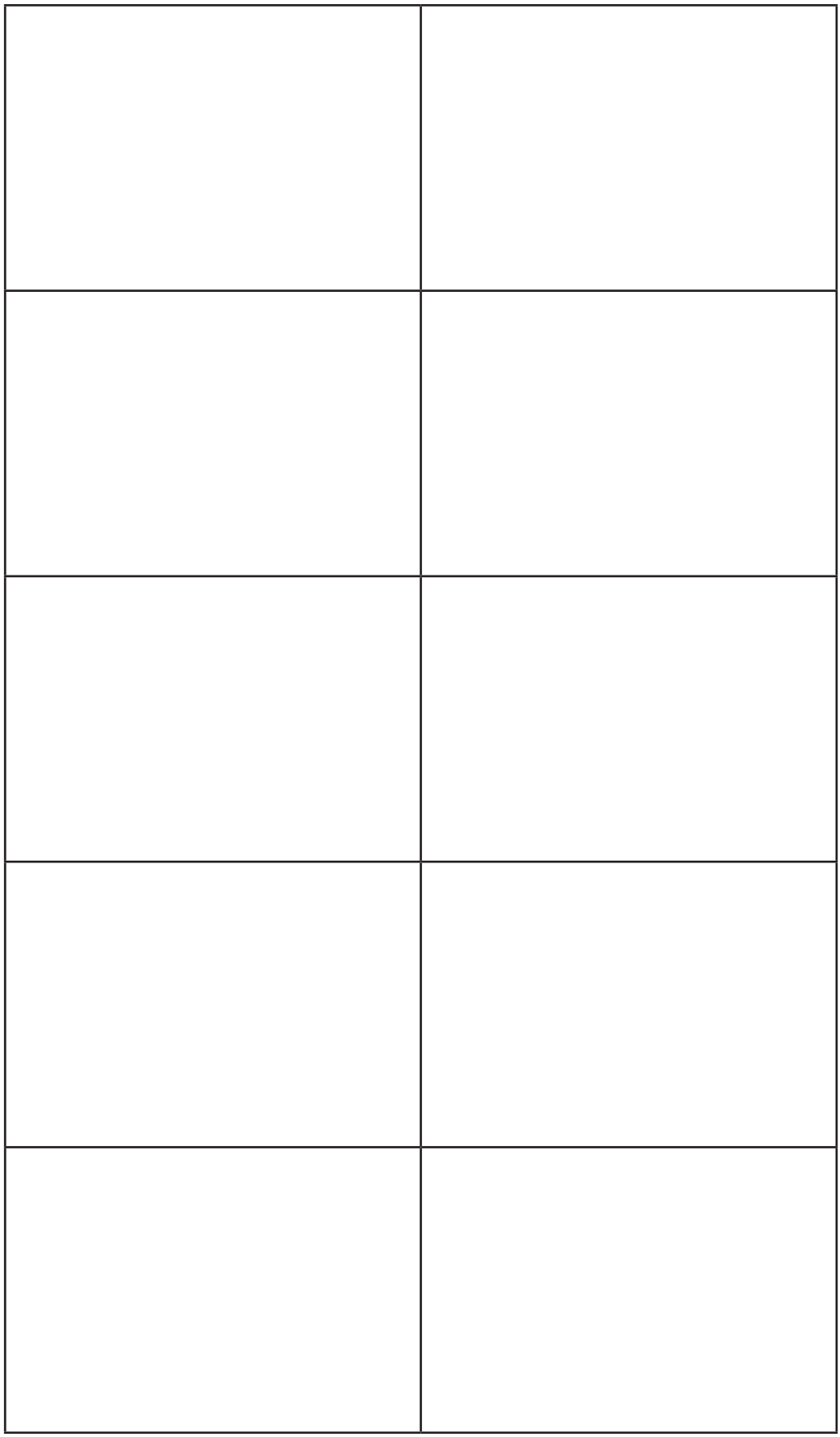
bit.ly/srpowell

MATH

Addition Concepts

Subtraction Concepts

Ten Frame



Hundreds, Tens, and Ones

Ones	
Tens	
Hundreds	

Addition Computation

24 + 35 =

64 + 29 =

Subtraction Computation

75 - 42 =

61 - 38 =

Multiplication Concepts

Division Concepts

Multiplication Computation

13 × 47 =

123 × 24 =

Division Computation

804 ÷ 12 =

1,746 ÷ 18 =

Fractions

Fraction	Length	Area	Set
$\frac{2}{3}$			
$\frac{1}{4}$			
$1\frac{1}{2}$			
$\frac{3}{7}$			

Fraction Addition and Subtraction

Problem	Representation
$\frac{1}{5} + \frac{3}{5}$	
$\frac{2}{8} + \frac{5}{8}$	
$\frac{1}{2} + \frac{1}{4}$	
$\frac{4}{6} + \frac{1}{3}$	
$\frac{4}{5} - \frac{1}{5}$	
$\frac{6}{8} - \frac{3}{8}$	
$\frac{7}{8} - \frac{2}{4}$	
$\frac{8}{9} - \frac{1}{3}$	

Fraction Multiplication and Division

Problem	Representation
2×3	
$\frac{1}{2} \times 2$	
$\frac{1}{2} \times \frac{4}{4}$	
$\frac{1}{2} \times \frac{2}{4}$	
$\frac{1}{2} \times \frac{3}{4}$	
$\frac{2}{3} \times \frac{3}{4}$	
$\frac{4}{4} \div \frac{1}{2}$	
$\frac{2}{4} \div \frac{1}{2}$	
$\frac{3}{4} \div \frac{1}{2}$	
$\frac{5}{6} \div \frac{2}{3}$	

1.2	**0.88**	**1.034**
2.8	**1.04**	**0.829**

Ones ● Tenths Hundredths Thousandths

Decimal Computation

Problem	Representation
2.34 + 1.61	
1.98 + 0.34	
2.34 − 1.61	
3.09 − 1.88	

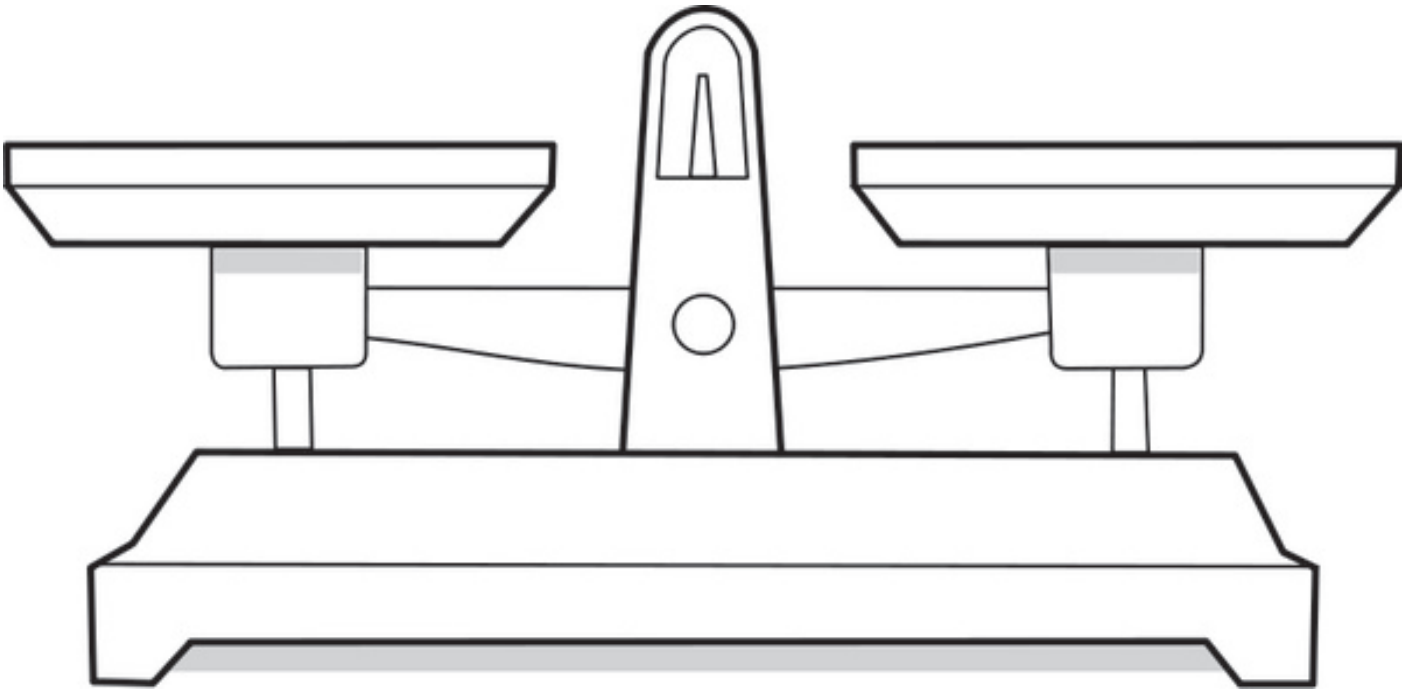
Integers

Integer Addition and Subtraction

Problem	Representation
3 + 5	
3 + (-5)	
-2 + 6	
-6 + (-3)	
5 – 3	
-3 – 4	
-2 – (-6)	

Equation Solving



$\_\_\_ + 3 = 7$

$9 - \_\_\_ = 6$

$6 = 2 + \_\_\_$

$6 = \_\_\_ - 2$

$3 + 5 = 4 + \_\_\_$

$9 - 6 = 7 - \_\_\_$

$5 + 4 = \_\_\_ + 2$

$6 - \_\_\_ = 7 - 3$

$7 = \_\_\_$

Equation Solving with Cups/Plates and Counters

Problem	Representations
$x + 2 = 5$	
$x + 2 = 5$	
$4 + x = 6$	
$4 + x = 6$	
$5 = x - 3$	
$-2 = x + 3$	

Equation Solving with Algebra Tiles

Problem	Representations
$x + 2 = 5$	
$x + 2 = 5$	
$4 + x = 6$	
$5 = x - 3$	
$-2 = x + 3$	
$x + 3 = -7$	
$y - 4 = 2$	

Equation Solving with Algeblocks

Problem	Representations
$x + 2 = 5$	
$4 + x = 6$	
$-2 = x + 3$	
$-1 = y - 4$	
$2x + 2 = 6$	
$x + 4 = 3x$	
$2(x + 3) = x + 4$	
$2x - 4 = 1 + 3x$	
$3y - 5 = -y - 1$	
$1 - x = x + 1$	

Multiplication and Division with Algeblocks

Problem	Representation
$x(3)$	
$-2(y)$	
$x(1 + x)$	
$-y(y + 2)$	
$(x - 2)(-2x)$	
$(y - 1)(y + 2)$	
$2x \div 2$	
$-2xy \div y$	
$-3x \div 3x$	
$4x^2 \div -x$	

Triangles

Name	Properties	Examples
Equilateral		
Isosceles		
Scalene		
Acute		
Obtuse		
Right		

Quadrilaterals

Name	Properties	Examples
Parallelogram		
Rectangle		
Rhombus		
Square		
Kite		
Trapezoid		

Spatial Reasoning

1. Tangrams

2. Pentominoes

3. Tessellations

Three-Dimensional Figures

Name	Properties (Faces, Edges, Vertices)	Examples
Rectangular Prism		
Cube		
Triangular Prism		
Hexagonal Prism		
Rectangular Pyramid		
Triangular Pyramid		
Hexagonal Pyramid		
Cylinder		
Cone		
Sphere		