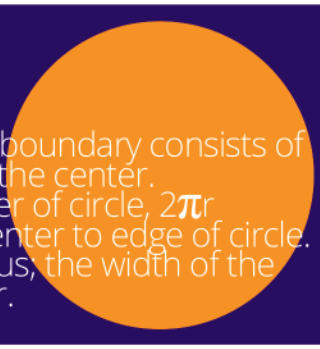
2D SHAPES

Fun with geometry!

Circle



- Round 2D figure whose boundary consists of points equidistant from the center.
- Circumference: perimeter of circle, $2\pi r$
- Radius: distance from center to edge of circle.
- Diameter: twice the radius; the width of the circle through the center.
- Area: πr^2

Rectangle

- Has 4 sides. Opposite sides are parallel and equal lengths.
- Has 4 angles, all right angles (90 degrees)

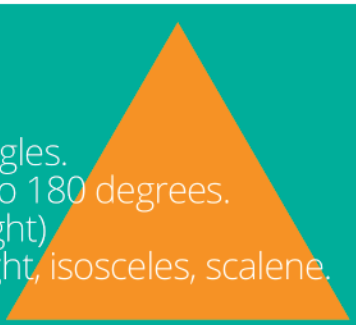
Square

- A special type of rectangle in which all of the sides are the same length, not just opposite sides.

Oval

- An elongated circle, like an ellipse.

Triangle



- Has 3 sides and 3 angles.
- Interior angles sum to 180 degrees.
- Area = 1/2(base)(height)
- Types: equilateral, right, isosceles, scalene.

Trapezoid

- 4 sides, only 2 are parallel.

Parallelogram

- 4 sides.
- Opposite sides are equal lengths.
- Opposite angles are equal.

Rhombus

- Special type of parallelogram in which all sides are equal lengths.
- Opposite sides are parallel.
- Opposite angles are equal.

NOTE: Squares, Rectangles and Rhombuses are all Parallelograms!

2D SHAPES

Triangle
3 sides

Quadrilateral
4 sides

Pentagon
5 sides

Hexagon
6 sides

Heptagon
7 sides

Octagon
8 sides

Nonagon
9 sides

Decagon
10 sides

Undecagon
11 sides

Dodecagon
12 sides

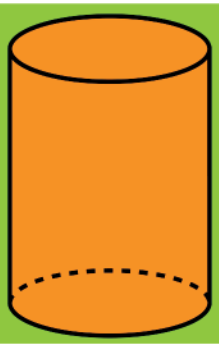
3D SHAPES

Sphere

A round, solid figure. Every point on the surface is equidistant from the center.

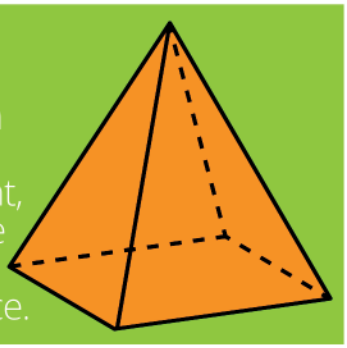
Cylinder

A solid geometric figure with straight parallel sides and a circular or oval cross section.



Pyramid

A pyramid is a polyhedron formed by connecting a polygonal base and a point, called the apex. Each base edge and apex form a triangle, called a lateral face.



Cube

Three-dimensional solid object bounded by six square faces, facets or sides, with three faces meeting at each vertex.

Cone

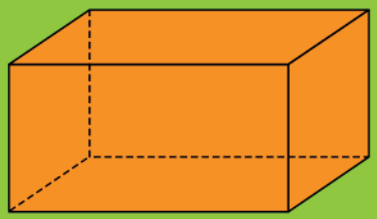
Three-dimensional geometric shape that tapers smoothly from a flat base to a point called the apex or vertex.

Triangular Prism

Three-sided prism.

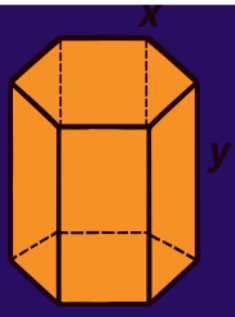
Cuboid

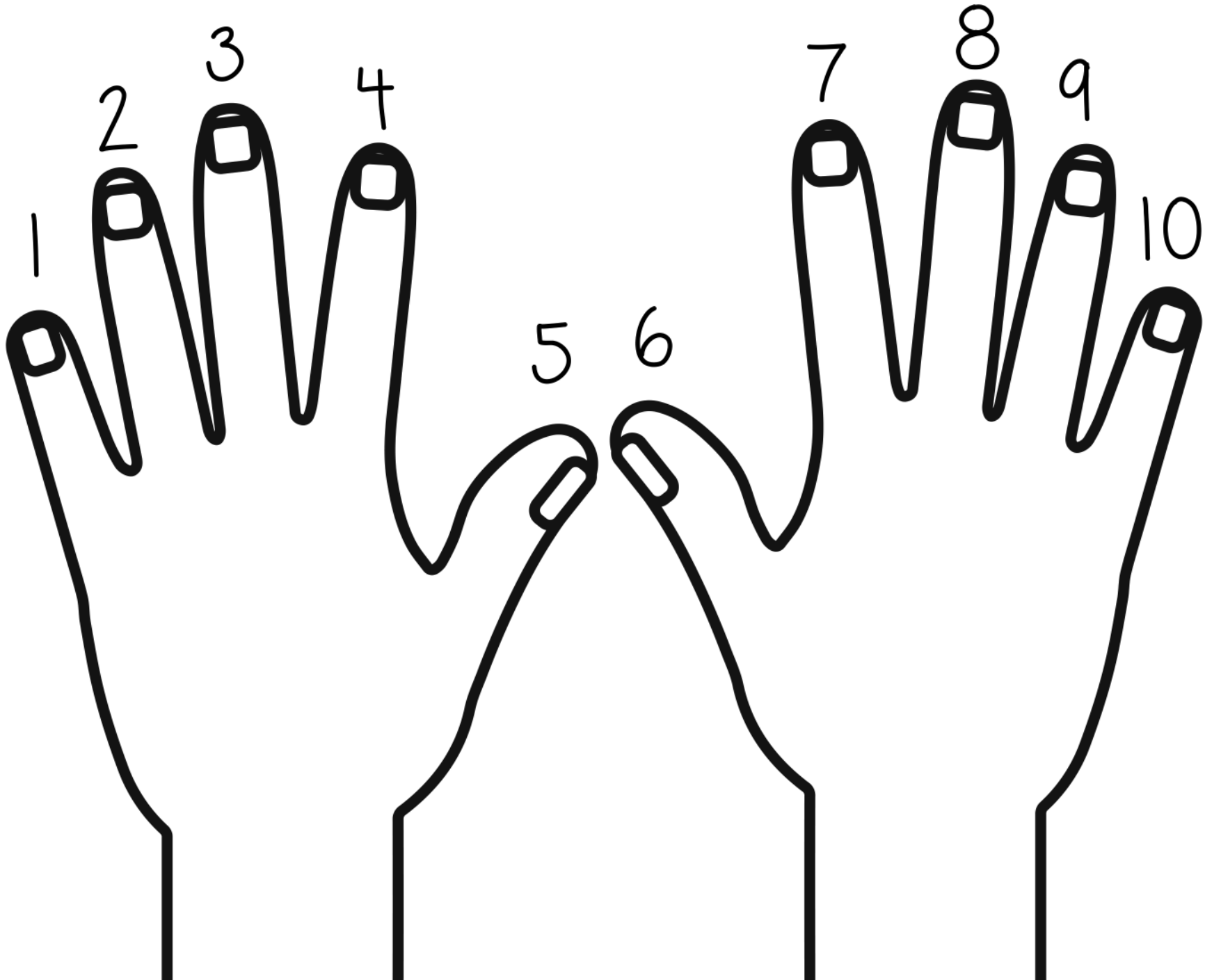
A solid which has six rectangular faces at right angles to each other.



Hexagonal Prism

Prism with hexagonal base. This polyhedron has 8 faces, 18 edges, and 12 vertices.




1
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Ones

1 x 1 = 1
1 x 2 = 2
1 x 3 = 3
1 x 4 = 4
1 x 5 = 5
1 x 6 = 6
1 x 7 = 7
1 x 8 = 8
1 x 9 = 9
1 x 10 = 10
1 x 11 = 11
1 x 12 = 12

Twos

2 x 1 = 2
2 x 2 = 4
2 x 3 = 6
2 x 4 = 8
2 x 5 = 10
2 x 6 = 12
2 x 7 = 14
2 x 8 = 16
2 x 9 = 18
2 x 10 = 20
2 x 11 = 22
2 x 12 = 24

Threes

3 x 1 = 3
3 x 2 = 6
3 x 3 = 9
3 x 4 = 12
3 x 5 = 15
3 x 6 = 18
3 x 7 = 21
3 x 8 = 24
3 x 9 = 27
3 x 10 = 30
3 x 11 = 33
3 x 12 = 36

Fours

4 x 1 = 4
4 x 2 = 8
4 x 3 = 12
4 x 4 = 16
4 x 5 = 20
4 x 6 = 24
4 x 7 = 28
4 x 8 = 32
4 x 9 = 36
4 x 10 = 40
4 x 11 = 44
4 x 12 = 48

Fives

5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50
5 x 11 = 55
5 x 12 = 60

Sixes

6 x 1 = 6
6 x 2 = 12
6 x 3 = 18
6 x 4 = 24
6 x 5 = 30
6 x 6 = 36
6 x 7 = 42
6 x 8 = 48
6 x 9 = 54
6 x 10 = 60
6 x 11 = 66
6 x 12 = 72

Sevens

7 x 1 = 7
7 x 2 = 14
7 x 3 = 21
7 x 4 = 28
7 x 5 = 35
7 x 6 = 42
7 x 7 = 49
7 x 8 = 56
7 x 9 = 63
7 x 10 = 70
7 x 11 = 77
7 x 12 = 84

Eights

8 x 1 = 8
8 x 2 = 16
8 x 3 = 24
8 x 4 = 32
8 x 5 = 40
8 x 6 = 48
8 x 7 = 56
8 x 8 = 64
8 x 9 = 72
8 x 10 = 80
8 x 11 = 88
8 x 12 = 96

Nines

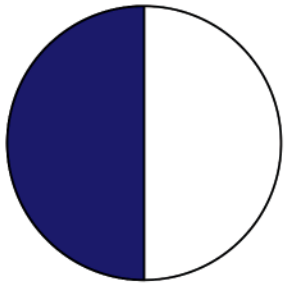
9 x 1 = 9
9 x 2 = 18
9 x 3 = 27
9 x 4 = 36
9 x 5 = 45
9 x 6 = 54
9 x 7 = 63
9 x 8 = 72
9 x 9 = 81
9 x 10 = 90
9 x 11 = 99
9 x 12 = 108

Tens

10 x 1 = 10
10 x 2 = 20
10 x 3 = 30
10 x 4 = 40
10 x 5 = 50
10 x 6 = 60
10 x 7 = 70
10 x 8 = 80
10 x 9 = 90
10 x 10 = 100
10 x 11 = 110
10 x 12 = 120

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$\frac{1}{2}$

$\frac{1}{2}$ 

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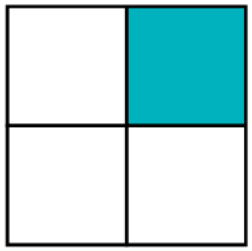
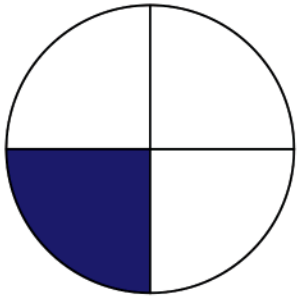
$\frac{1}{4}$ 

$\frac{1}{4}$ 

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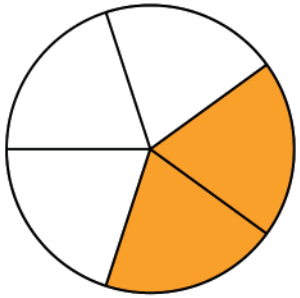
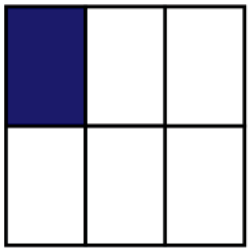
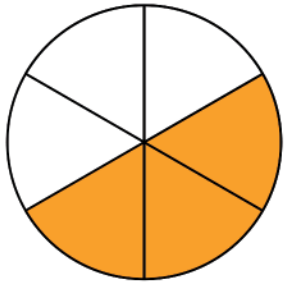
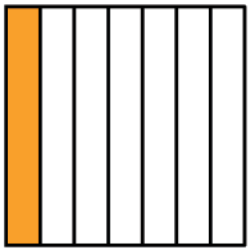
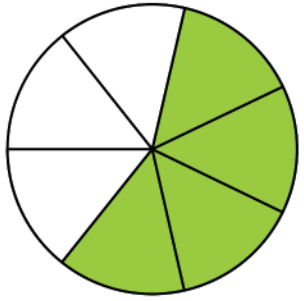
$\frac{2}{5}$ 

$\frac{1}{6}$ 

$\frac{3}{6}$ 

$\frac{1}{7}$ 

$\frac{4}{7}$ 

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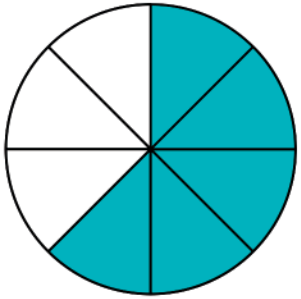
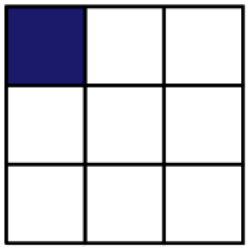
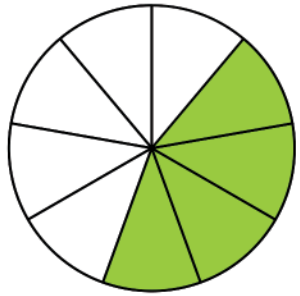
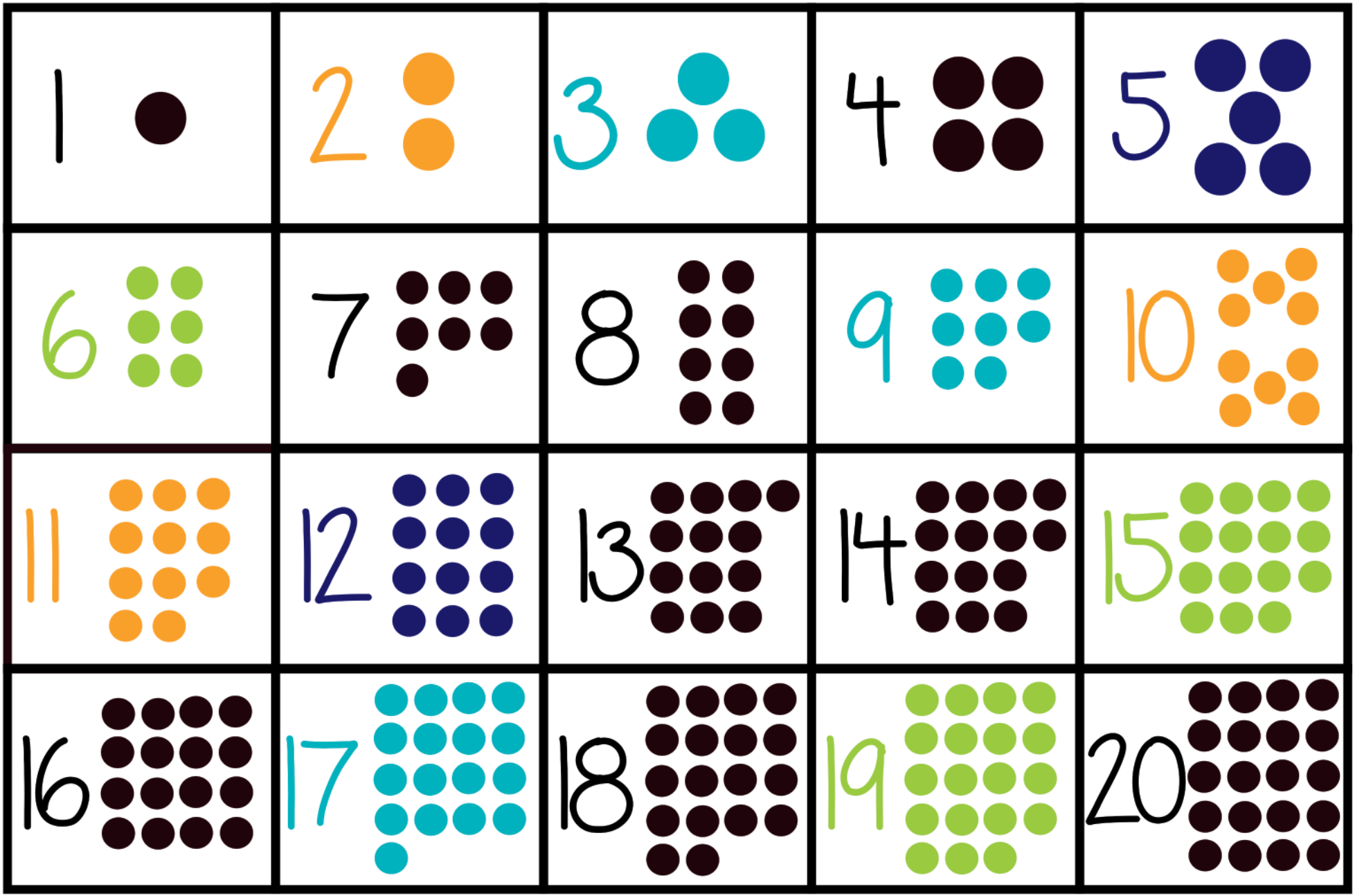
$\frac{5}{8}$ 

$\frac{1}{9}$ 

$\frac{4}{9}$ 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1	82	83	84	85	86	87	88	89	90
2	81	80	79	78	77	76	75	92	91
3	6	7	8	9	10	11	74	93	94
4	5	20	19	18	17	12	73	96	95
27	26	21	44	45	16	13	72	97	98
28	25	22	43	46	15	14	71	70	99
29	24	23	42	47	64	65	68	69	100
30	31	32	41	48	63	66	67	58	57
35	34	33	40	49	62	61	60	59	56
36	37	38	39	50	51	52	53	54	55

Start at number 1 and find your way to number 100 without removing your pencil from the paper.

Number Maze

Start at the number 1 and find your way to number 50 without removing your pencil from the paper.

			38	39	40	41	42
			37	36	35	34	43
27	28	29	30	31	32	33	44
26	23	22	21	8	7	6	45
25	24	19	20	9	4	5	46
16	17	18	11	10	3	50	47
15	14	13	12	1	2	49	48

a) I am an odd number. Take away a letter and I become even. What number am I?

b) Why doesn't anyone talk to circles?

c) Why did the two 4's skip a meal?

d) If there are three apples and you take away two, how many apples do you have?

e) Where can you add 2 to 11 and get 1?

a) SEVEN
b) Because it's pointless.
c) Because they already eight.
d) Two
e) On a clock.