Math Common Core State Standards Review

Kindergarten into 1st Grade

Kindergarten Common Core Overview

Counting and Cardinality

- Know number names and the count sequence.

- Count to tell the number of objects.

- Compare numbers.

Operations and Algebraic Thinking

- Understand addition as putting together and
adding to, and understand subtraction as taking apart
and taking from.

Number and Operations in Base Ten

- Work with numbers 11–19 to gain foundations
for place value.

Measurement and Data

- Describe and compare measurable attributes.

- Classify objects and count the number of
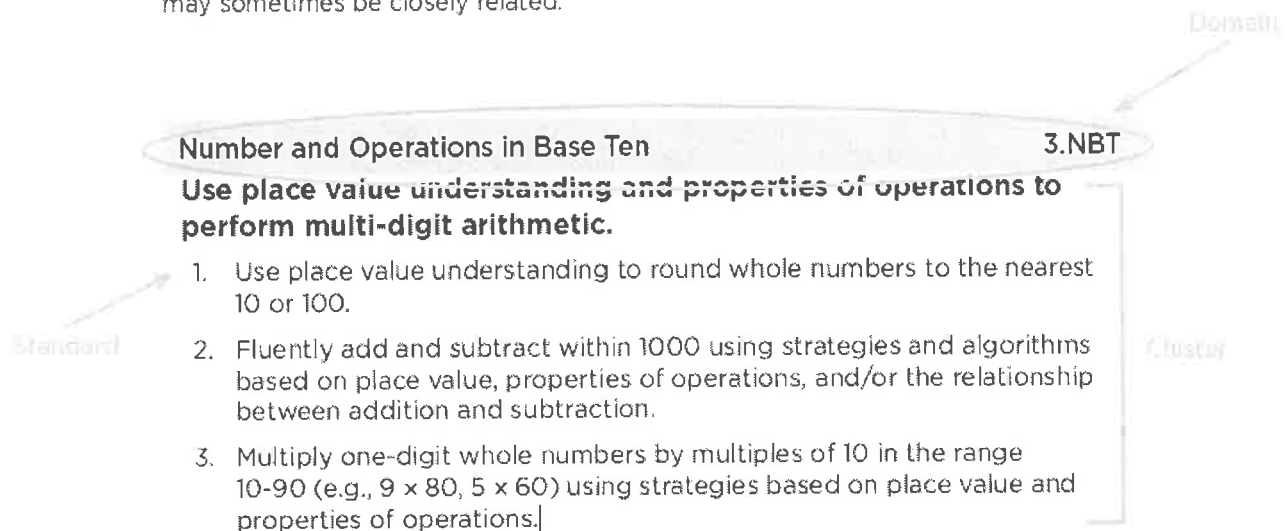objects in categories.

Geometry

- Identify and describe shapes.

- Analyze, compare, create, and compose shapes.

How to read the grade level standards

Standards define what students should understand and be able to do.

Clusters are groups of related standards. Note that standards from different clusters may sometimes be closely related, because mathematics is a connected subject.

Domains are larger groups of related standards. Standards from different domains may sometimes be closely related.

Domain

Number and Operations in Base Ten	3.NBT

Use place value understanding and properties of operations to perform multi-digit arithmetic.

Standard

Cluster

1. Use place value understanding to round whole numbers to the nearest 10 or 100.

2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

3. Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

Mathematical Practices

1. Make sense of problems and persevere in solving them.

2. Reason abstractly and quantitatively.

3. Construct viable arguments and critique the reasoning of others.

4. Model with mathematics.

5. Use appropriate tools strategically.

6. Attend to precision.

7. Look for and make use of structure.

8. Look for and express regularity in repeated reasoning.

Kindergarten: Counting & Cardinality

Know number names and the count sequence.
CCSS.Math.Content.K.CC.A.1
Count to 100 by ones and by tens.

CCSS.Math.Content.K.CC.A.2
Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

CCSS.Math.Content.K.CC.A.3
Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

Count to tell the number of objects.
CCSS.Math.Content.K.CC.B.4
Understand the relationship between numbers and quantities; connect counting to cardinality.

CCSS.Math.Content.K.CC.B.4.a
When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

CCSS.Math.Content.K.CC.B.4.b
Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

CCSS.Math.Content.K.CC.B.4.c
Understand that each successive number name refers to a quantity that is one larger.

CCSS.Math.Content.K.CC.B.5
Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.

Compare numbers.
CCSS.Math.Content.K.CC.C.6
Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.[1]

CCSS.Math.Content.K.CC.C.7
Compare two numbers between 1 and 10 presented as written numerals.

Number Grid (0 to 110)

									0
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
101	102	103	104	105	106	107	108	109	110

Number-Grid Puzzles: 2-Digit Numbers

Fill in the pieces on the grid.

0						60					
	9										
	7										
						99					
					44						
	2										
		21					61			91	

Name: _____ **Date:** _____ **Time:** _____

Number-Grid Puzzles: 2-Digit Numbers

In Problems 3-5, complete each section of the number grids. Count up by 1s and 10s to help you fill in the numbers.

1. Count up by 1s.

7, _____, _____, _____,

_____, _____

2. Count up by 10s.

50, _____, _____, _____,

_____, _____

3.

37		

4.

58		

5.

76	

6. Describe how you solved Problem 5.

Name: _____   Date: _____   Time: _____

Counting On from 2-Digit Numbers

Use your number grid to answer the questions.

1. Count up by 1s. 72, _____, _____, _____, _____, _____	**2.** Count up by 1s. 40, _____, _____, _____, _____, _____
3. Count up by 1s. 89, _____, _____, _____, _____, _____	**4.** Count up by 1s. 50, _____, _____, _____, _____, _____
5. Count up by 1s. 19, _____, _____, _____, _____, _____	**6.** Count up by 1s. 36, _____, _____, _____, _____, _____

Writing Numbers 0–9

Write each number, first by tracing, then by using the starting point(s).

1.

(1) (2)

0 1 2 3 4 5

2.

6 7 8 9

Name: _____ **Date:** _____ **Time:** _____
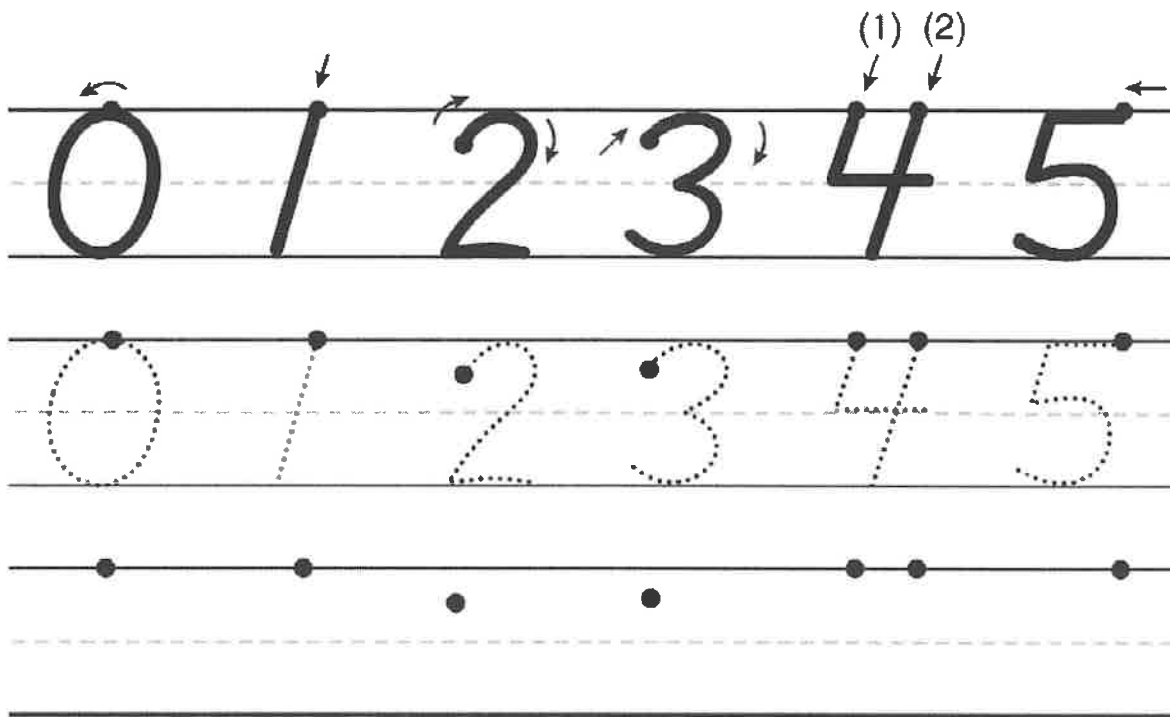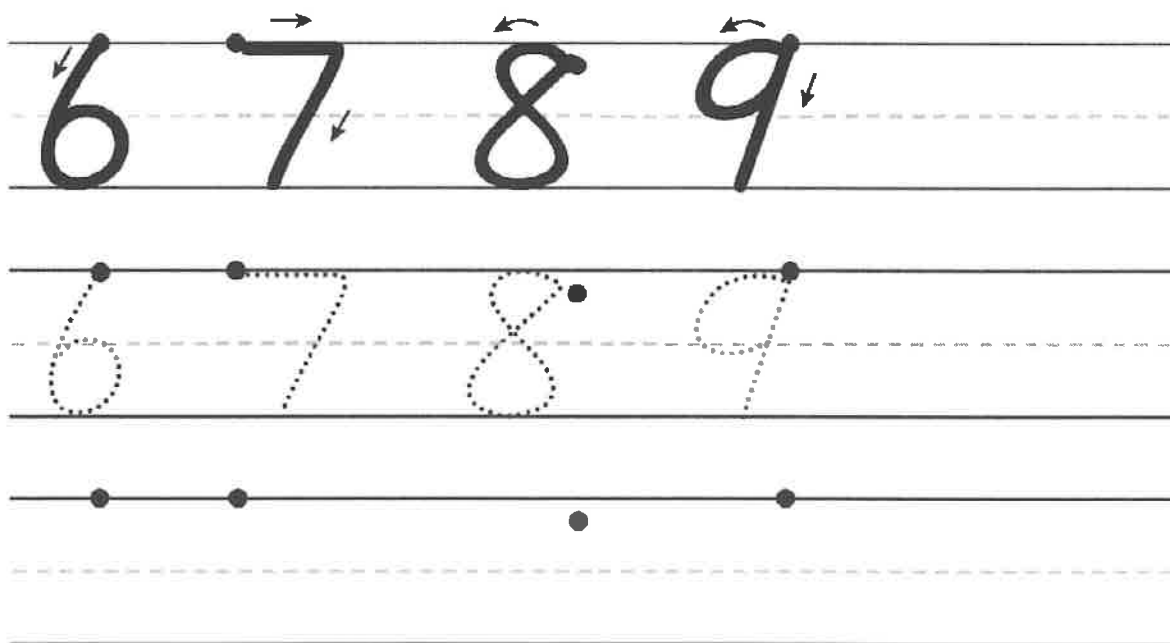
Sorting and Counting

1. How many triangles are there?

△ △ △ △ △ △ △
△ △ △ △ △ △ △

_____ triangles

2. How many circles are there?

_____ circles

How many squares are there?

_____ squares

How many triangles are there?

_____ triangles

□ △ ○ □ △ □ △ ○ □ △
□ △ ○ □ △ □ △ ○ □ △
□ △ ○ □ △ □ △ ○ □ △
□ △ ○ □ △ □ △ ○ □ △
□ △ ○ □ △ □ △ ○ □ △
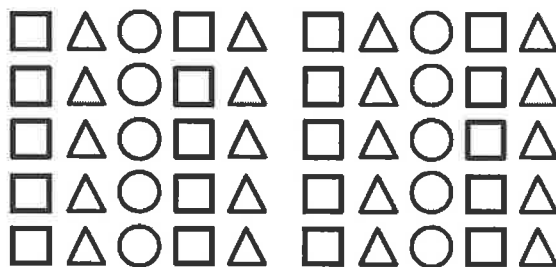
3. How many circles are there?

_____ circles

How many squares are there?

_____ squares
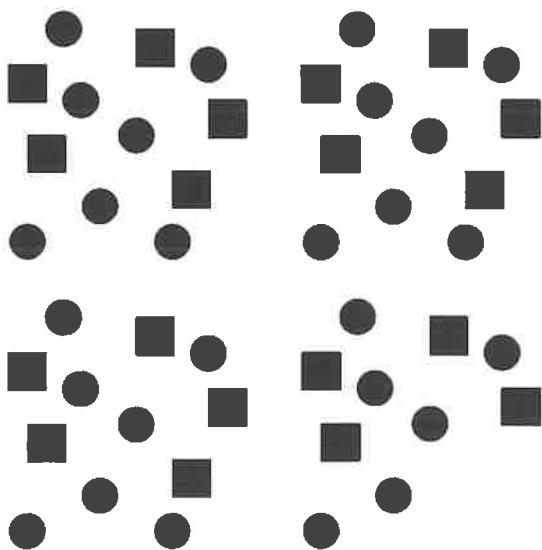
4. How many blocks are there?

_____ blocks

How many arrows are there?

_____ arrows

S2
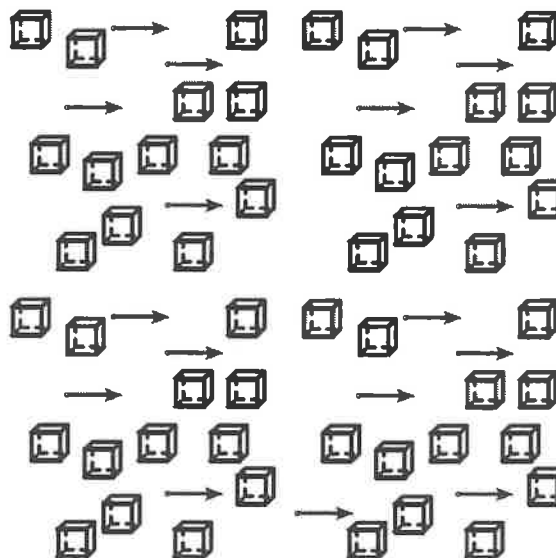
How Much More? How Much Less?

1. How many cubes are there? _____ cubes	**2.** How many pyramids are there? _____ pyramids
3. Ty Ⓟ Ⓟ Ⓟ Ⓟ Ⓟ Ⓟ Ⓟ Ana Ⓟ Ⓟ Ⓟ Ⓟ Ⓟ Who has less? _____ How much less? _____¢ Circle the question that asks you to compare.	**4.** Tia Ⓟ Ⓟ Ⓟ Ⓟ Ⓟ Ⓟ Ian Ⓟ Ⓟ Who has more? _____ How much more? _____¢ Circle the question that asks you to find the difference.
5. Claudio has 3 pennies. Sophia has 9 pennies. Who has more? _____ How much more? _____¢ Circle the question that asks you to compare.	**6.** Raven has 8 pennies. Darnell has 7 pennies. Who has less? _____ How much less? _____¢ Circle the question that asks you to find the difference.
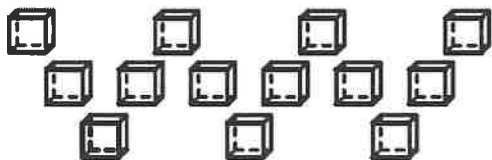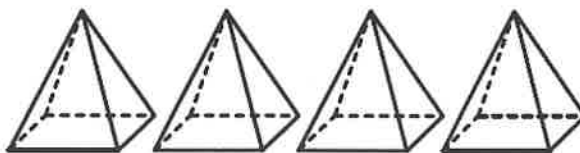
Kindergarten: Operations & Algebraic Thinking

Understand addition, and understand subtraction.
CCSS.Math.Content.K.OA.A.1
Represent addition and subtraction with objects, fingers, mental images, drawings', sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

CCSS.Math.Content.K.OA.A.2
Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

CCSS.Math.Content.K.OA.A.3
Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).

CCSS.Math.Content.K.OA.A.4
For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

CCSS.Math.Content.K.OA.A.5
Fluently add and subtract within 5.

Making Name Collections

1. Draw another way to make groups of blocks that are still 8 in all.
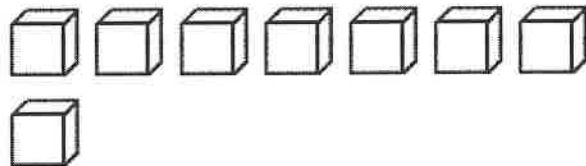
2. Draw another way to make groups of blocks that are still 10 in all.
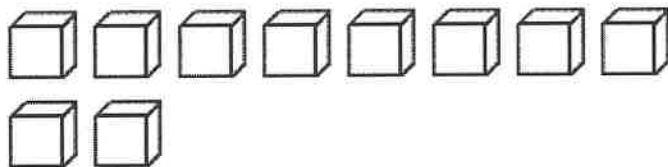
3. Draw another way to make groups of blocks that are still 10 in all.

Name: _____ Date: _____ Time: _____
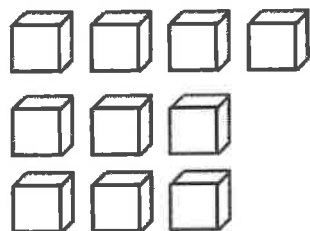
Solving Number Stories
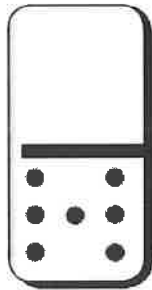
1. How many dots?	2. How many tally marks?
	~~HHt~~ ~~HHt~~ ~~HHt~~ ////
	_____ tally marks
_____	

3. Use symbols to write a number sentence for the story.

Allison had 3 books. She bought 13 more books. How many books does she have in all?

_____ ☐ _____ = _____

What type of number story is this? _____

4. Use symbols to write a number sentence for the story.

Jeremy has 6 new CDs and 17 old CDs. How many more old CDs does he have than new CDs?

_____ ☐ _____ = _____

What type of number story is this? _____

Solving Number Stories

1. Use symbols to write a number sentence for the story.

   Jake has 7 green cards and 10 yellow cards. How many cards does he have in all?

   _____ ☐ _____ = _____

   What type of number story is this? _____

2. Use symbols to write a number sentence for the story.

   Kyle has 7 new marbles and 13 old marbles. How many more old marbles does he have than new marbles?

   _____ ☐ _____ = _____

   What type of number story is this? _____

3. Use symbols to write a number sentence for the story.

   Erin had 8 DVDs. She bought 7 more DVDs. How many DVDs does she have in all?

   _____ ☐ _____ = _____

   What type of number story is this? _____

Adding Zero

1. Complete the facts.

$$\begin{array}{r} 5 \\ + \ 0 \\ \hline \end{array}$$ ☐

$$\begin{array}{r} 0 \\ + \ 9 \\ \hline \end{array}$$ ☐

$$\begin{array}{r} 0 \\ + \ 8 \\ \hline \end{array}$$ ☐

$$\begin{array}{r} 3 \\ + \ 0 \\ \hline \end{array}$$ ☐

2. Complete the facts.

$6 + 0 = \boxed{}$

$0 + \boxed{} = 10$

$8 + \boxed{} = 0$

$4 + 0 = \boxed{}$

$0 + 5 = \boxed{}$

$\boxed{} + 0 = 7$

3. Complete the facts.

$$\begin{array}{r} 0 \\ + \ 14 \\ \hline \end{array}$$ ☐

$$\begin{array}{r} 28 \\ + \ 0 \\ \hline \end{array}$$ ☐

$76 + 0 = \boxed{}$

$\boxed{} + 99 = 99$

1. $\begin{array}{r} 3 \\ +5 \\ \hline \end{array}$

2. $\begin{array}{r} 4 \\ +4 \\ \hline \end{array}$

3. $\begin{array}{r} 1 \\ +1 \\ \hline \end{array}$

4. $\begin{array}{r} 2 \\ +4 \\ \hline \end{array}$

5. $\begin{array}{r} 4 \\ +3 \\ \hline \end{array}$

6. $\begin{array}{r} 3 \\ +3 \\ \hline \end{array}$

7. $\begin{array}{r} 5 \\ +1 \\ \hline \end{array}$

8. $\begin{array}{r} 2 \\ +5 \\ \hline \end{array}$

9. $\begin{array}{r} 5 \\ +3 \\ \hline \end{array}$

10. $\begin{array}{r} 4 \\ +5 \\ \hline \end{array}$

11. $\begin{array}{r} 4 \\ +5 \\ \hline \end{array}$

12. $\begin{array}{r} 2 \\ +4 \\ \hline \end{array}$

13. $\begin{array}{r} 3 \\ +3 \\ \hline \end{array}$

14. $\begin{array}{r} 1 \\ +1 \\ \hline \end{array}$

15. $\begin{array}{r} 5 \\ +2 \\ \hline \end{array}$

16. $\begin{array}{r} 1 \\ +2 \\ \hline \end{array}$

17. $\begin{array}{r} 2 \\ +5 \\ \hline \end{array}$

18. $\begin{array}{r} 1 \\ +2 \\ \hline \end{array}$

19. $\begin{array}{r} 5 \\ +3 \\ \hline \end{array}$

20. $\begin{array}{r} 5 \\ +4 \\ \hline \end{array}$

21. $\begin{array}{r} 5 \\ +2 \\ \hline \end{array}$

22. $\begin{array}{r} 1 \\ +4 \\ \hline \end{array}$

23. $\begin{array}{r} 2 \\ +3 \\ \hline \end{array}$

24. $\begin{array}{r} 4 \\ +2 \\ \hline \end{array}$

25. $\begin{array}{r} 5 \\ +3 \\ \hline \end{array}$

26. $\begin{array}{r} 1 \\ +3 \\ \hline \end{array}$

27. $\begin{array}{r} 2 \\ +3 \\ \hline \end{array}$

28. $\begin{array}{r} 1 \\ +4 \\ \hline \end{array}$

29. $\begin{array}{r} 5 \\ +2 \\ \hline \end{array}$

30. $\begin{array}{r} 5 \\ +5 \\ \hline \end{array}$

Kindergarten: Number & Operations in Base Ten

Work with numbers 11-19 to gain foundations for place value.

CCSS.Math.Content.K.NBT.A.1

Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Facts with Ten

For each number, do the following:

♦ Draw counters in the ten-frame to show the number. Only draw one counter in each box.

♦ When the ten-frame is full, begin a row below it to draw the rest of the counters.

♦ Fill in the blank to show an addition fact for the number.

♦ Fill in the blank to show a subtraction fact for the number. Hint: Look at the counters below the frame to help you write the facts.

Example: Number: 13

$$10 + \underline{\ 3\ } = 13$$
$$13 - 10 = \underline{\ 3\ }$$

1. Number: 11

$$10 + \underline{\ \ \ \ } = 11$$
$$11 - 10 = \underline{\ \ \ \ }$$

2. Number: 15

$$10 + \underline{\ \ \ \ } = 15$$
$$15 - 10 = \underline{\ \ \ \ }$$

3. Number: 18

$$10 + \underline{\ \ \ \ } = 18$$
$$18 - 10 = \underline{\ \ \ \ }$$

4. Number: 17

$$10 + \underline{\ \ \ \ } = 17$$
$$17 - 10 = \underline{\ \ \ \ }$$

Facts with Ten

1. Add. $\quad$ 6 $\qquad\qquad$ 1 $\underline{+\ 4}$ $\qquad\quad$ $\underline{+\ 0}$	**2.** Subtract. $\quad$ 7 $\qquad\qquad$ 6 $\underline{-\ 5}$ $\qquad\quad$ $\underline{-\ 3}$
3. Use a ten frame and counters to fill in the blanks. **a.** $10 + 8 =$ _____ **b.** $10 + 5 =$ _____	**4.** Use a ten frame and counters to fill in the blanks. **a.** $16 - 10 =$ _____ **b.** $19 - 10 =$ _____
5. Use a ten frame and counters to fill in the blanks. **a.** $10 +$ _____ $= 17$ **b.** $10 +$ _____ $= 14$	**6.** Explain how you found the solution in Problem 5b.

Name: _____ **Date:** _____ **Time:** _____

Different Names for a Number

1. Subtract. 14 – 12 = _____	**2.** Add. 6 + 11 = _____
3. What number is 9 more than 7? _____ Write the name of that number using words. _____	**4.** What number is 5 less than 8? _____ Write "5 less than 8" using numbers and symbols. _____
5. What number is in the teens and has a 9 in it? _____ Draw a picture of that many squares.	**6.** Write the number from Question 5 as the sum of two numbers.

Different Names for a Number

1. What number is 7 more than 6?

_____

Write "7 more than 6" using numbers and symbols.

_____

2. What number is 4 less than 9?

_____

Draw a picture of that many squares.

3. What number is in the teens and has a 7 in it?

_____

Write the name of that number using words.

_____

Kindergarten: Measurement & Data

Describe and compare measurable attributes.
CCSS.Math.Content.K.MD.A.1
Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

CCSS.Math.Content.K.MD.A.2
Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.*

Classify objects and count the number of objects in each category.
CCSS.Math.Content.K.MD.B.3
Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.[1]

Describing Measurable Attributes of Objects

1. Draw a green X on the **small** ball.

2. Draw an orange circle around the **heavy** book.

3. Draw a blue X on the **thick** pillow.

4. Draw a green circle around the **long** object.

5. Draw an orange X on the **thin** book.

6. Draw a purple circle around the **little** pillow.

7. Draw a red circle around the **light** object.

8. Draw a blue circle around the **large** ball.

9. Draw a **tall** red flower.

10. Draw a **short** purple flower.
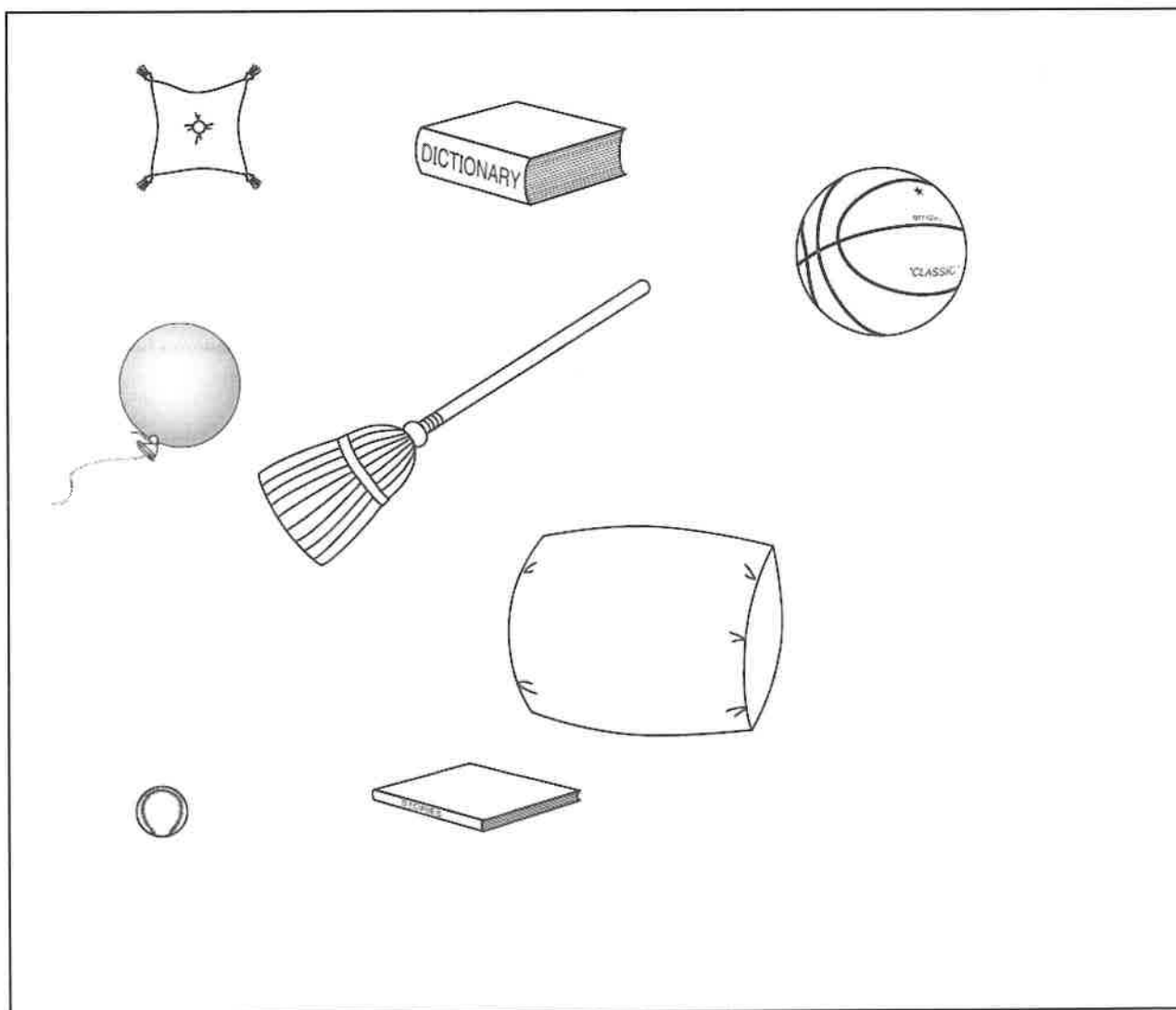
Comparing Lengths of Objects

1. Order the 3 objects below from shortest to longest.

   leaf   _____

   key   _____

   marker _____

2. Ana measured 2 pencils using paper clips. Circle the longer of the 2 pencils.
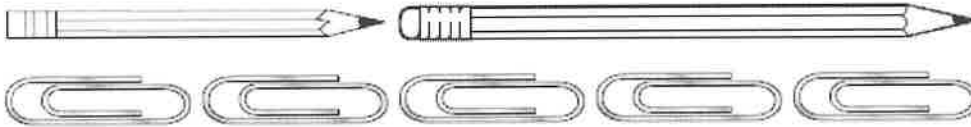
3. Circle the longer crayon.

   CRAYON

   CRAYON

4. Write 1 sentence that compares the objects in Question 1. Use words like *longer, shorter, about, a little more than,* and so on.

   _____

   _____

   _____

   _____

Which One is Heavier?

1. Look at the pairs of objects below. In each pair, circle the object that you think is heavier.

a.

Shoe

Marble

b.

Sock

Brick

c.

Feather

Tape Measure

2. Look at the pairs of objects below. In each pair, circle the object that you think is lighter.

a.

Pattern-Block Template

Television

b.

Scissors

Chair

c.

Egg

Penny

Sorting Nature Collections

1. Circle all of the beans.
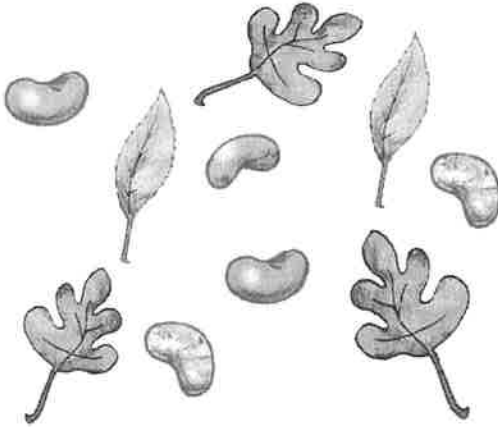
2. Put an X on all of the rocks.

Color the shells blue.
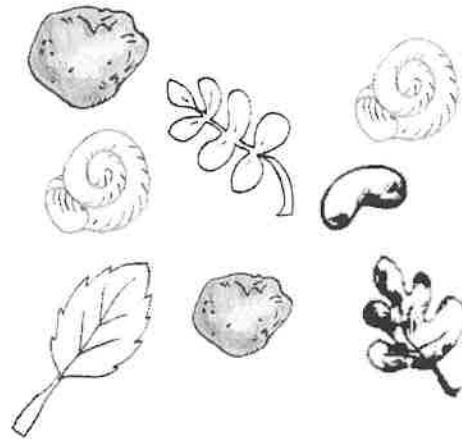
3. Circle all of the leaves.
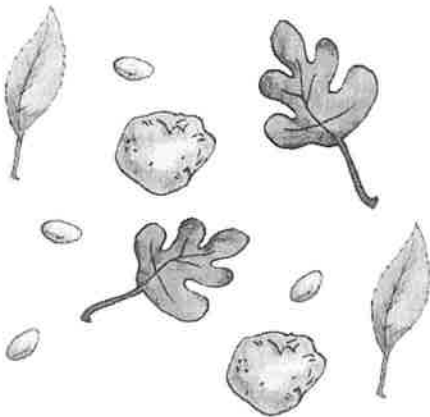
How many did you circle?

_____

4. How many objects are NOT leaves in Problem 3?

_____

"What's My Rule?" Fishing with Attribute Blocks

1. To make a house, you need blocks that have 4 sides. Circle the blocks that you can use.
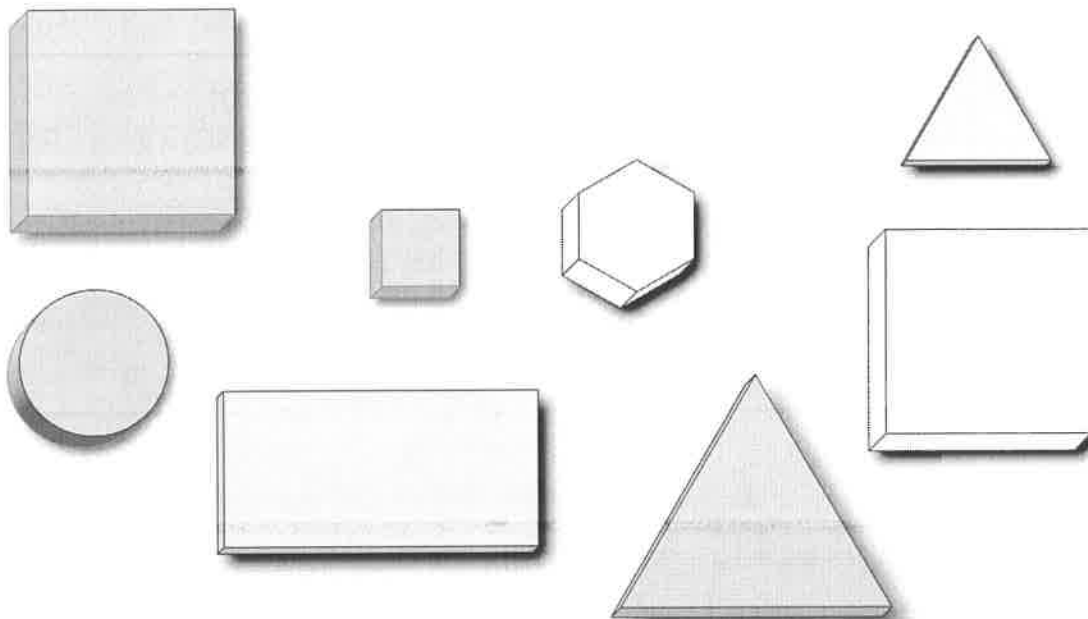
2. To make a car, you need round blocks for wheels. Circle the round blocks.
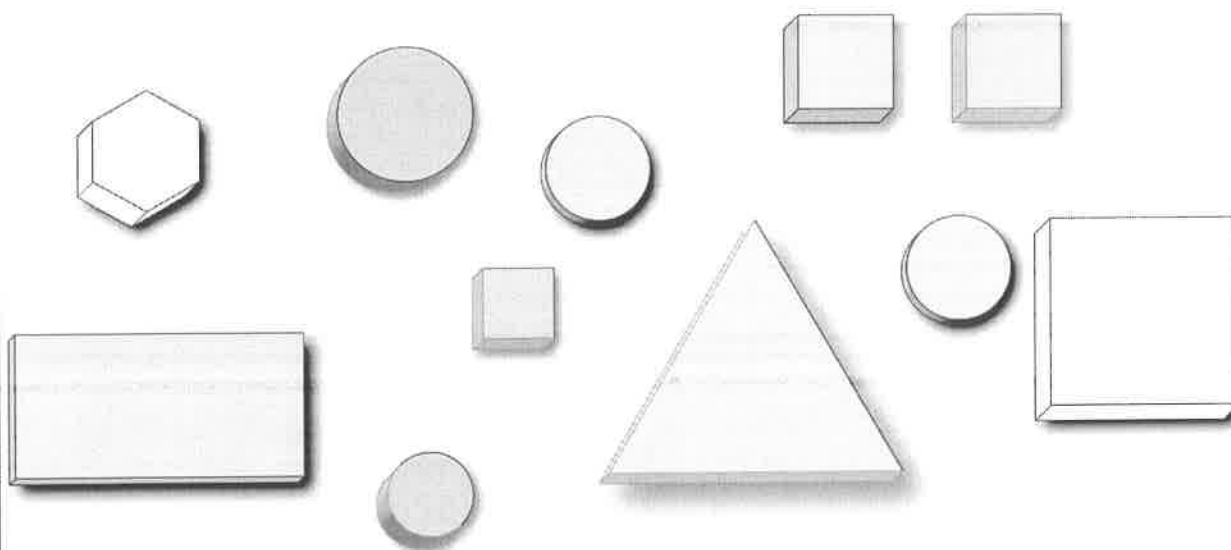
Name: _____ Date: _____ Time: _____

"What's My Rule?" Fishing with Attribute Blocks

1. Draw an X on all the round shapes.

   Circle all the shapes with 3 sides.
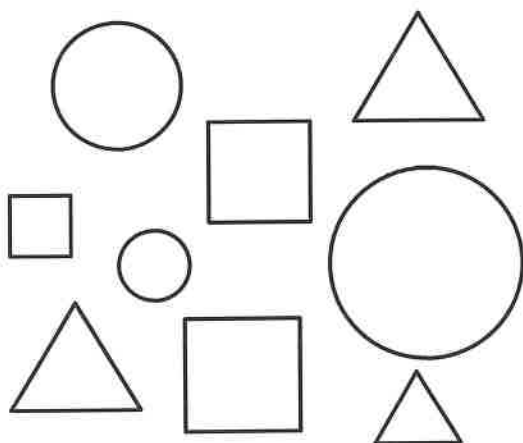
2. Draw an X on the shape that does not belong.
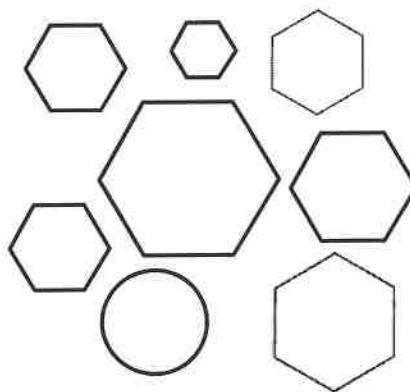
3. How many sides does each shape below have?
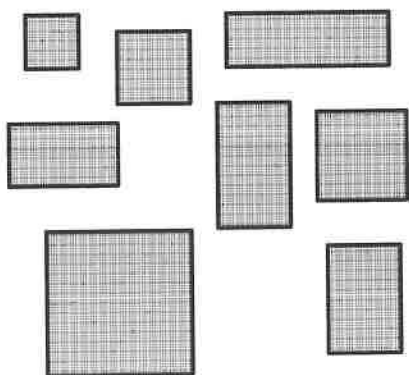
   _____ sides

4. How many sides does each shape below have?

   _____ sides

S2
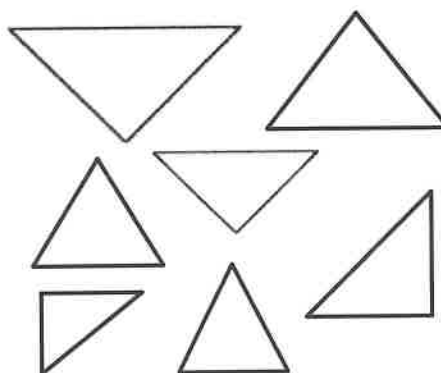
Kindergarten: Geometry

Identify and describe shapes.
CCSS.Math.Content.K.G.A.1
Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.

CCSS.Math.Content.K.G.A.2
Correctly name shapes regardless of their orientations or overall size.

CCSS.Math.Content.K.G.A.3
Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

Analyze, compare, create, and compose shapes.
CCSS.Math.Content.K.G.B.4
Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).

CCSS.Math.Content.K.G.B.5
Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

CCSS.Math.Content.K.G.B.6
Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"*

Name: _____ Date: _____ Time: _____

Shapes and Their Positions

1. Color the circle green.
Color the square red.
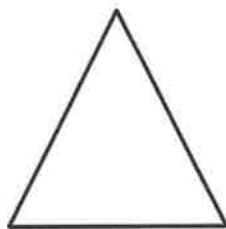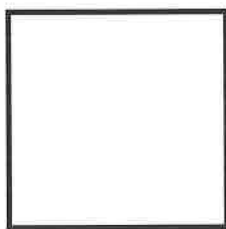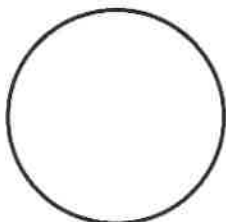
2. Describe the location of the circle.
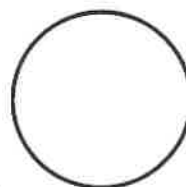
3. Describe the location of the triangle.
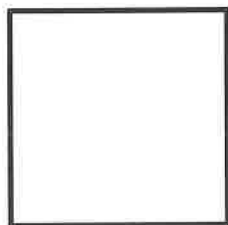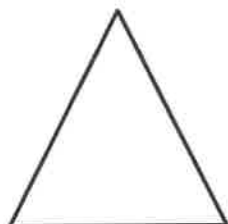
4. I am beside the circle and above the rectangle. What shape am I?

S2
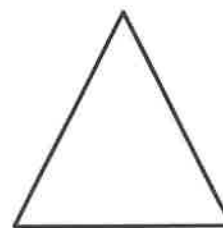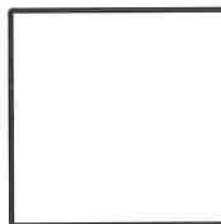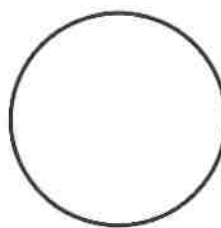
Identifying and Describing Shapes

Circle the correct name for each shape.
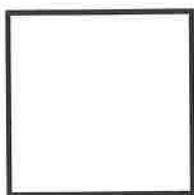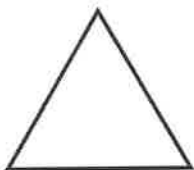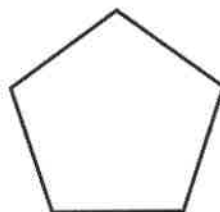
1. square	**2.** trapezoid	**3.** pentagon
circle	triangle	rhombus
4. trapezoid	**5.** triangle	**6.** hexagon
rectangle	rectangle	rhombus
7. circle	**8.** rhombus	**9.** rectangle
pentagon	square	hexagon
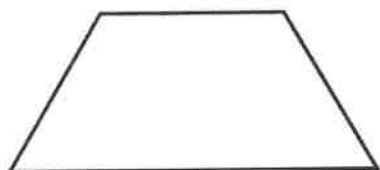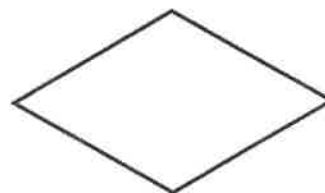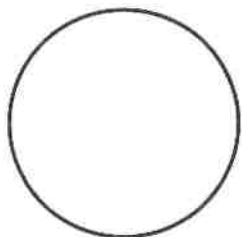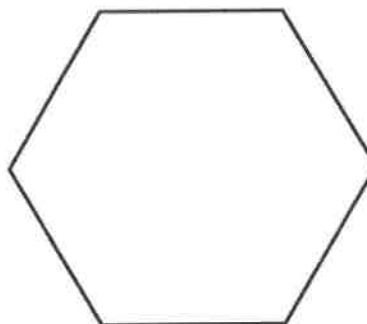
Name: _____ Date: _____ Time: _____

Finding and Describing Shapes

Use crayons or colored pencils for Problem 3.

1. Fill in the oval next to the correct name for the shape.
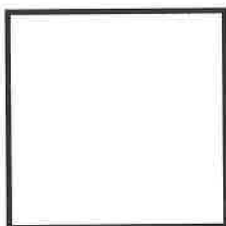
O square   O rectangle

O triangle   O circle

2. A triangle has _____ corners. Fill in the oval next to the correct answer.

O 2   O 3   O 4

3. Color the circle blue. Color the rectangle yellow.

S2

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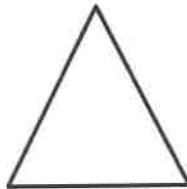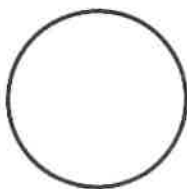
3-Dimensional Shapes

corner   flat faces

curved surfaces
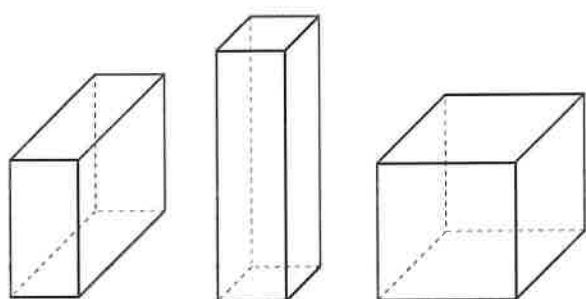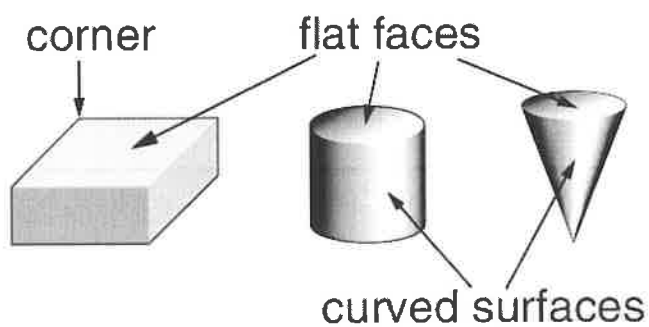
rectangular prisms
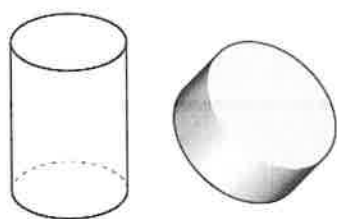
cube
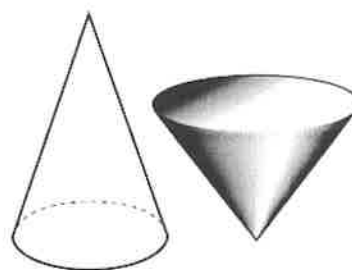
sphere

cylinders

cones
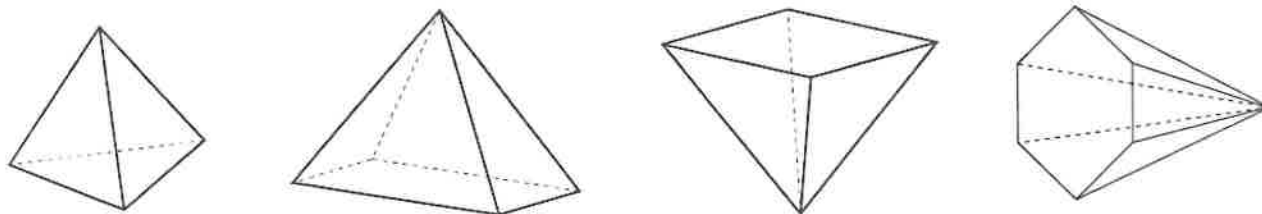
pyramids

Naming 3-Dimensional Shapes

Word Bank

sphere	rectangular prism	pyramid
cube	cone	cylinder

Write the name of each 3-dimensional shape.

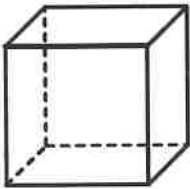**1.**
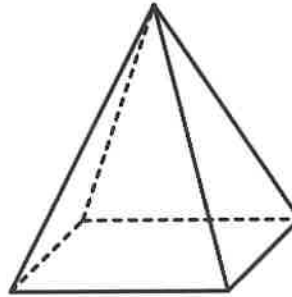
_____

2.

_____

3.

_____

4.

_____

5.

_____

6.

_____
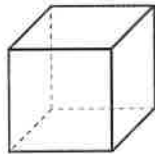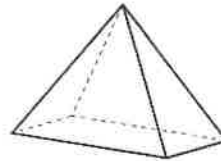
Naming 3-Dimensional Shapes

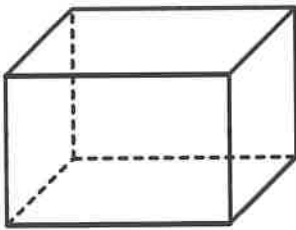**1.** Circle the pictures that show 3-dimensional shapes.
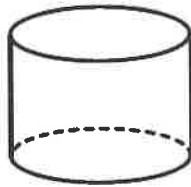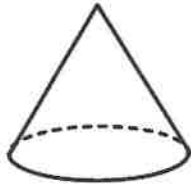
2. Name this 3-dimensional shape.

O cone

O cylinder

O pyramid

3. Name this 3-dimensional shape.

O rectangular prism

O sphere

O cylinder

4. This is a picture of a 3-dimensional figure called a _____.