

Kindergarten Curriculum Overview

Number Sense

- Compare sets using terms: more than, less than, fewer than, as many as, the same as, is equal to.
- Read and write numbers up to 30 by connecting the sets that represent the quantities shown.
- Count with tens and ones blocks (up to 30).
- Order numbers from least to greatest.
- Name a number that is one more or one less than a given number, or is between two numbers.
- Model simple addition and subtraction problems using pictured sets.
- Solve simple word problems.
- Demonstrate the joining of multiple sets (e.g., 3 vans each holding 5 people).
- Skip count by 2's, 5's and 10's (up to 30).
- Recognize a reasonable estimate to a problem.
- Recognize what information is missing in order to solve a word problem.
- Compose/decompose numbers using pictured sets (e.g., 6 popsicles = $4 + 2$, 6 popsicles = $5 + 1$)
- Identify the value of numbers and locate their points on a number line.
- Count forward and backward with and without a number line.
- Use ordinal numbers to indicate position (e.g., first, fourth).
- Match number words to their corresponding numerals (e.g., five = 5).
- Match the symbols (+, -, =) with their meanings.
- Divide a set in half.
- Identify odd and even numbers.
- Identify the value of zero and match it to the null (empty) set.
- Determine which number is closer to a given number.
- Shade fractional parts (e.g., color $\frac{1}{4}$ of a rectangle).
- Answer questions using a fraction number line.
- Determine placement of fractions on a number line.

Algebra and Functions

- Extend number, picture and letter patterns.
- Identify and classify objects by attributes.

Measurement

- Make comparisons in reference to weight, size, capacity, temperature (e.g., lightest, heaviest, bigger, shorter, cooler, warmer, longer).
- Make estimations of weight and height (e.g., a dog could be about 2 feet long).
- Identify concepts of time (e.g., today, yesterday, tomorrow, midnight, noon, morning, afternoon, evening), and the tools that measure them (e.g., clocks, calendars).
- Read digital and analog clocks (to nearest hour and half-hour).
- Match the time on a digital clock to the time on an analog clock.
- Determine an hour later and an hour earlier for a given time.
- Differentiate between noon and midnight.
- Identify the minute hand and the hour hand on an analog clock.
- Match a time to an everyday event (e.g., 12:30 for lunch, 9:00 for bedtime).
- Match everyday events to the time of day (e.g., breakfast in the morning).
- Read a calendar and identify its components (e.g., days of week, months, date, weekend).
- Match attributes to each of the four seasons.
- Estimate the time it would take to complete a task (e.g., putting on socks takes 30 seconds).
- Order events using terms: first, next and last.
- Measure with standard and non-standard units.
- Determine which measurement tool is appropriate (e.g., thermometer to measure temperature).

- Identify penny, nickel, dime, quarter, a one dollar bill and know their values.
- Count coins to determine total value.
- Compare values to find equivalency of coins (e.g., 1 dime = 1 nickel and 5 pennies).

Geometry

- Identify two and three-dimensional geometric objects (e.g., circle, triangle, square, rectangle, trapezoid, octagon, hexagon, sphere, cone).
- Relate three-dimensional shapes to objects in the real world.
- Compare objects based on their attributes (e.g., size, sides, shape, position, vertices).
- Recognize congruent shapes.
- Describe one object in relation to another using terms: on, inside, outside, middle, right of, in front of, above, below, over, under, last.
- Differentiate between the right hand and the left hand.
- Determine how many smaller shapes would cover a larger shape.
- Classifying by attributes, determine which object does not belong with the others in the set.

Data Analysis, Statistics and Probability

- Identify and extend patterns: number, letter and picture.
- Answer questions using information on graphs: pie, line, picture, horizontal bar, vertical bar (e.g., which has the most or least).
- Read a graph where a symbol indicates more than one unit (e.g., one star equals two children).
- Answer questions about the likelihood of events (e.g., which is more likely to occur; or the probability of picking a red marble out of a bag of red, blue and green marbles).
- Find all the different possible combinations given two different sets (e.g., number of possible outfits using 2 shirts and 2 pairs of pants).
- Make a future prediction based on past evidence (e.g., predict future rainfall based on prior rainfall).

Extras

- Laminated Number Line
- Laminated Clock
- Laminated Ruler
- Punch-out Money
- Number Flash Cards
- Hundred Chart
- Dalmatian Station Attribute Page
- Shape Identification Page
- Simple Addition and Subtraction Math Facts Practice Sheets

Instructions for Parents

- Because most children just completing kindergarten are not proficient readers, **this program should be completed with the assistance of an adult.** For this reason an answer sheet is not provided.
- To use Summer Math Skills Sharpener, simply tear off a page and complete it with your child. The program is designed to be used 3 days per week for 10 weeks.
- Supplemental lessons have been added to address changes in state and National Standards. These lessons are **OPTIONAL**.
- Skip material not yet taught to your child. Introduce concepts for which your child shows readiness.
- “Help Pages” have been added at the front of the book to clarify certain concepts.
- You will notice several symbols repeated throughout the program. They signal that you are to refer to the auxiliary pages **located at the back of the book**. When you see the following symbols, find the corresponding item to complete the activity.



Find the “**Hundred Chart**” at the back of the book to help answer the question. Use pennies, beans, buttons, etc. as markers.



Find the “**Dalmatian Station**” to help answer the question.



Find “**Shape Up**” to help answer the question or complete the activity.



Use the “**Punch-Out Money**” to help solve the problems with this symbol. Keep for use throughout the program.

“**Cutouts**”: **clock, ruler, and number line**. Keep for use throughout the program.



is the symbol for you to use the number line;



is the symbol for you to use the clock;



is the symbol for you to use the ruler.

- The calendar in the back of the book is provided as an extra activity to complete with your child. Questions are on the reverse side.
- Make the Summer Math Skills Sharpener an enjoyable experience and a springboard for other math activities.

We appreciate your comments. Please return the enclosed evaluation page before November 1st, after your child has returned to school in the fall and you are able to determine the success of the Summer Math Skills Sharpener.

KINDERGARTEN HELP PAGES

TEN BLOCKS

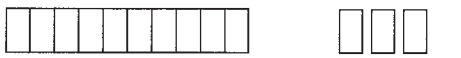
What are they?

In most schools children use commercially produced base – ten blocks. After many hands-on experiences, children learn to recognize their symbolic representation on paper.

Examples:

$$13 = \underline{1} \text{ ten} + \underline{3} \text{ ones}$$

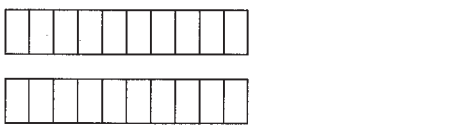
Base-ten representation:



$\begin{array}{c} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \\ \underline{1} \text{ ten} \end{array} \quad + \quad \begin{array}{c} \boxed{} \boxed{} \boxed{} \\ \underline{3} \text{ ones} \end{array}$

$$20 = \underline{2} \text{ tens} + \underline{0} \text{ ones}$$

Base-ten representation:



$\begin{array}{c} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \boxed{} \\ \underline{2} \text{ tens} \end{array} \quad + \quad \begin{array}{c} \phantom{\boxed{}} \phantom{\boxed{}} \phantom{\boxed{}} \phantom{\boxed{}} \phantom{\boxed{}} \phantom{\boxed{}} \phantom{\boxed{}} \phantom{\boxed{}} \phantom{\boxed{}} \phantom{\boxed{}} \\ \underline{0} \text{ ones} \end{array}$

What is the purpose?

Counting and grouping large collections of different kinds of materials help children see that they can count by ones or, more efficiently, group and count when faced with large quantities. Both methods have the same result. Recognizing groups and organizing materials (for easier counting) help children discover that 10 is the basis of our place value system.

KINDERGARTEN HELP PAGES

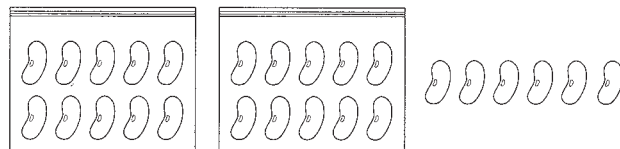
Children experience many grouping activities with everyday materials and thoroughly understand the many - to - one correspondence of the grouping materials.

If the child needs more real-life experiences before moving to the base-ten blocks, take some grouping material (dried beans, buttons, pennies, pasta) and let him or her count them.

Example: 26 beans

Using small self-sealing bags, group the beans into sets of ten. There should be 6 left over that are not bagged.

The child then makes a picture and writes: $26 = \underline{2}$ tens + $\underline{6}$ ones



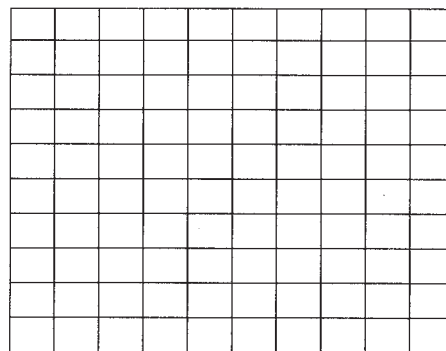
Other possible activities could be to bundle stir sticks, straws or craft sticks with rubber bands into sets of ten.

Hundreds:

Children can make hundreds by taking 10 self-sealing “ten bags” and placing them into a larger bag.

Or they can take 10 bundles of straws, sticks, etc. and bundle them together with a larger rubber band to make one hundred.

When children are comfortable with these experiences, they can recognize and use the “hundreds flat” with base ten blocks.



hundreds flat

Math Facts Sharpener • Kindergarten

$$\begin{array}{r} 0 \\ +4 \\ \hline \end{array}$$

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

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

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

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

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

$$\begin{array}{r} 1 \\ +9 \\ \hline \end{array}$$

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

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

$$\begin{array}{r} 2 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} 0 \\ +1 \\ \hline \end{array}$$

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

$$\begin{array}{r} 2 \\ +6 \\ \hline \end{array}$$

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

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

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

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

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

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

$$\begin{array}{r} 3 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} 0 \\ +2 \\ \hline \end{array}$$

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

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

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

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

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

$$\begin{array}{r} 6 \\ +1 \\ \hline \end{array}$$

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

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


$$\begin{array}{r} 6 \\ +2 \\ \hline \end{array}$$

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

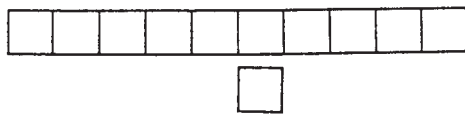
$$\begin{array}{r} 3 \\ +5 \\ \hline \end{array}$$

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

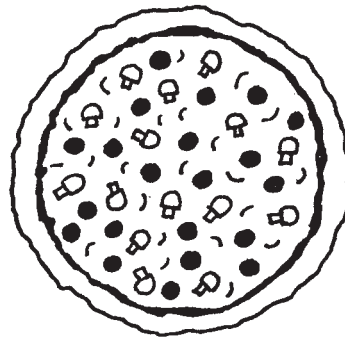
Lesson #2

1.  What number comes before 40? _____
 What number comes after 40? _____

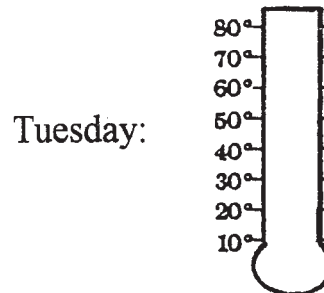
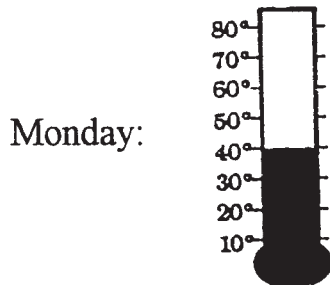
2. Write the number of blocks that are shown below.
 (See "Help Page" in the front of the book.)



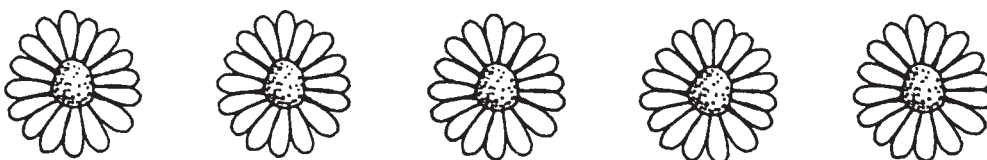
3. Using a pencil, cut this pizza in half.




4. On Monday it was 40°. On Tuesday it was warmer. Color in a **warmer** temperature for Tuesday.

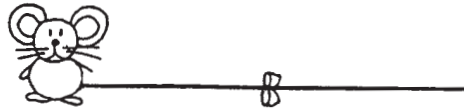



5. Circle the **middle** flower:



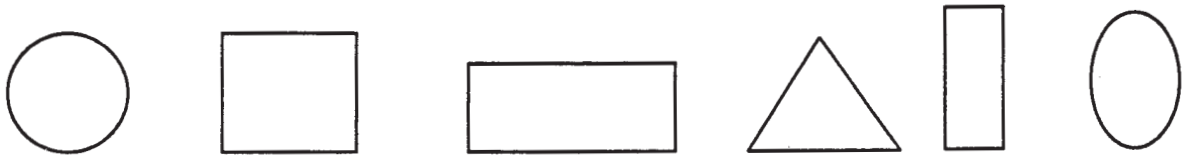
Lesson #2 (continued)


6.  (Use the "Cut-Out" ruler in the back of the book.)
How long is Maggie Mouse's tail? _____ inches

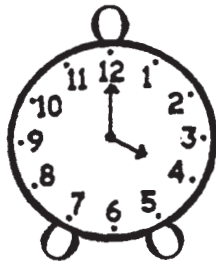


7.  (See "Dalmatian Station" at the back of the book.)
How many **big** dogs are on the "Dalmatian Station" page? _____

8. Circle all the shapes that have 4 sides.



9.  (Use the "Cut-Out" clock in the back of the book.)
Show one hour later than this time:

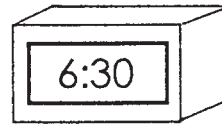
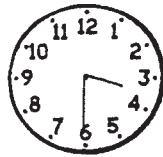
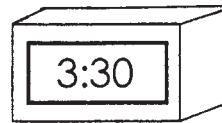
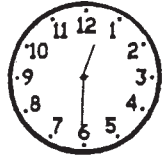


10. What fraction on this number line comes between $\frac{1}{2}$ and 1 ? _____



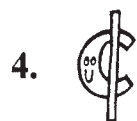
Lesson #11

1. Draw a line from the clocks on the left to the matching clocks on the right.



2. Finish this pattern: A b A b A _____

3. Divide this candy bar so you and a friend can share. Be sure the pieces are equal!



Sally had a



, a



, and a




in her book bag.

When she got home, she had only 5¢ left. Name the two coins that were lost.

_____ and _____



Lesson #11 (continued)


5.  Show what time you get home from school.


6. Cross out **half** of the apples:



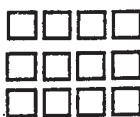
7.  Circle the numbers that are **more** than 50: 70 80 30

8.



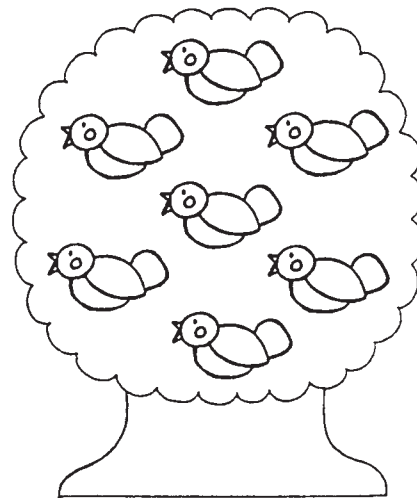


=



1 ten + 2 ones = _____ ones

9. 7 birds were sitting in a tree.
2 birds flew away.
How many birds were left?
(Hint: Cross out 2 birds to help you.)




10. Circle the triangle that does **not** belong with the others:



Lesson #24

1. Name two foods that are shaped like a square.

2.  Put these numbers in order from **least** to **greatest**:

95

98

93

88

3. Circle the **fifth** doll:



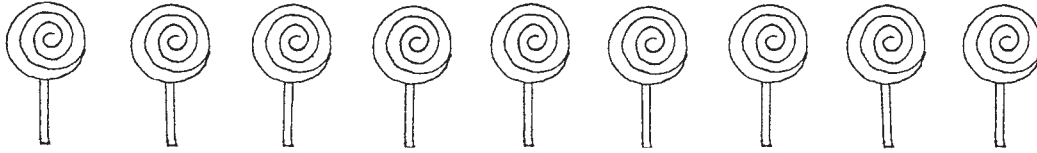
4. Write the number of blocks shown below.



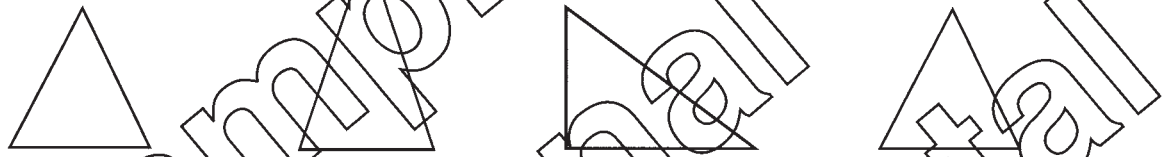


Lesson #34

1. Derrick bought 9 suckers. He wants to share them **equally** with his 2 friends. How many suckers will Derrick **and** his 2 friends each receive?



2. Circle the 2 shapes that are the **same**.



3. Look at the graph below. Each  equals 2 children who finished reading *Good Night Moon*.



- A. On which 2 days did the same number of children finish their books?

_____ and _____

- B. On which day did 10 children finish their books? _____

- C. On which day did only 2 children finish their books? _____



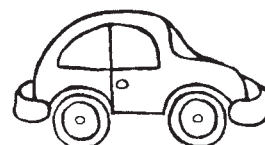
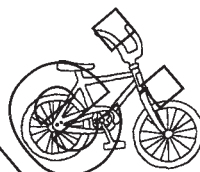
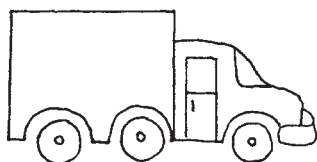
Lesson #34 continued

4. Circle which is **longer**:

a year or **a month**

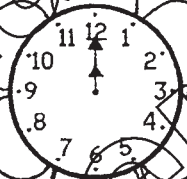
a week or **a month**

5. Circle the **lightest** vehicle. **X** the **heaviest** vehicle.



6.  Count all the puppies that have collars **and** are sitting down.

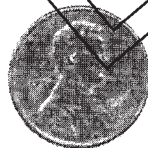
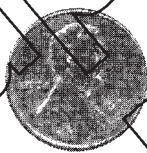
7. Look at the time on this clock.
Can you tell if it is noon or midnight?



Circle: **Yes** or **No**

8. Can you answer this question? Jared has to be at school at 9:00. It is now 8:30 and he has to walk to school. Will he be late? If you cannot answer this question, what do you still need to know?

9. Put an X on the coins below that equal this coin:



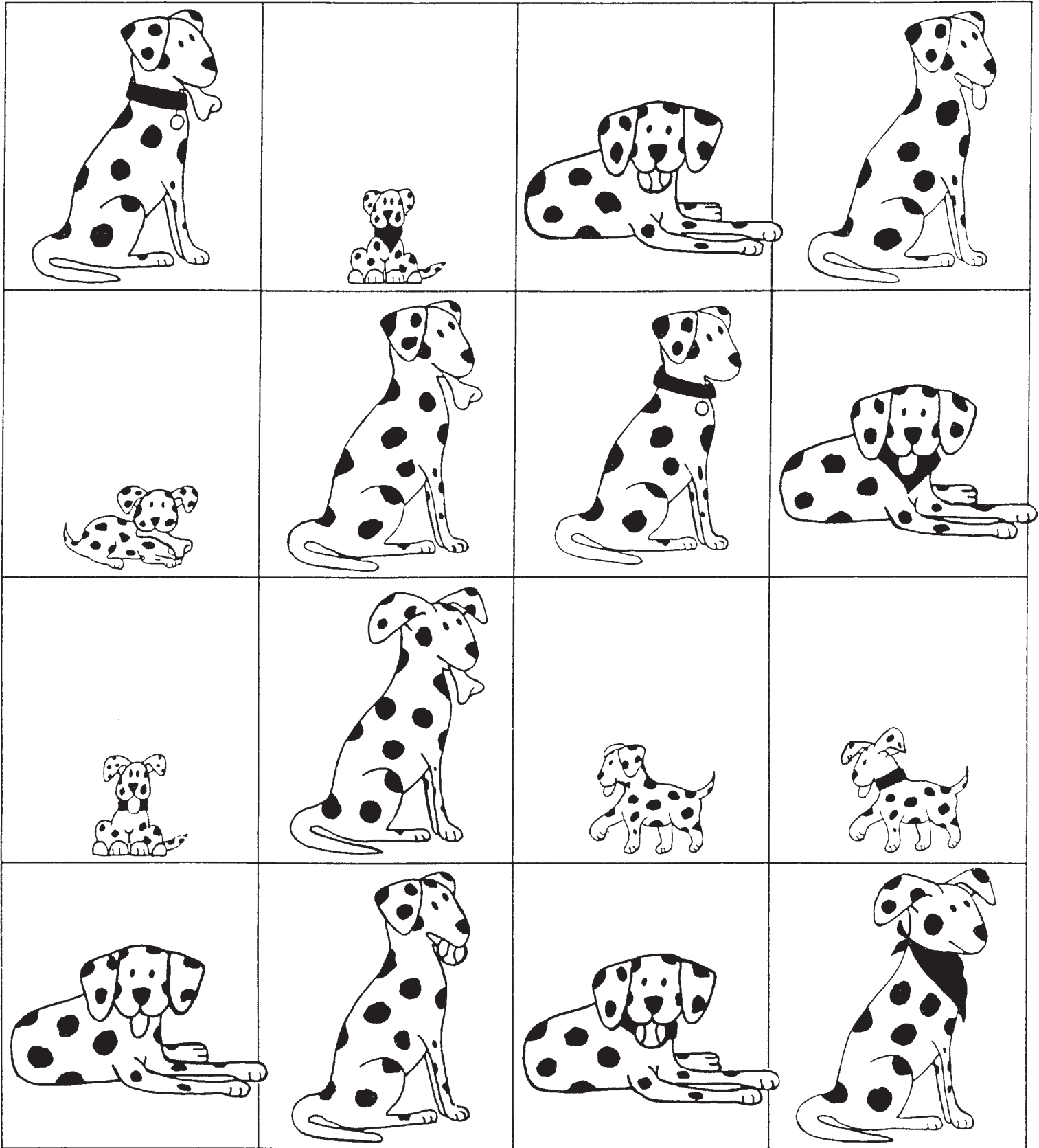
10. Is   plus   equal to    ?



HUNDRED CHART

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

Dalmatian Station



Math Facts Sharpener • Kindergarten

$$\begin{array}{r} 9 \\ -6 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ -1 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ -9 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ -1 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ -1 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ -4 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ -2 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ -1 \\ \hline \end{array}$$

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$$\begin{array}{r} 8 \\ -4 \\ \hline \end{array}$$

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$$\begin{array}{r} 7 \\ -6 \\ \hline \end{array}$$

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$$\begin{array}{r} 3 \\ -3 \\ \hline \end{array}$$

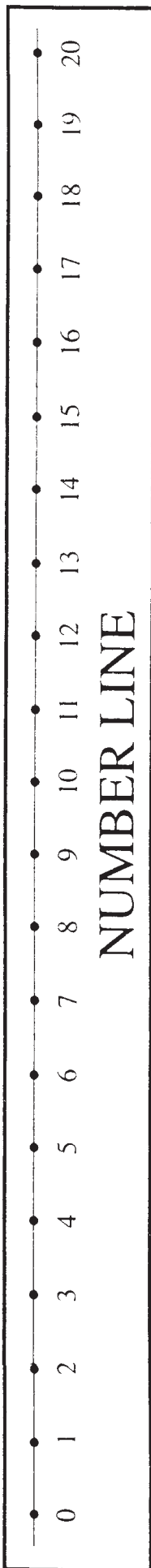
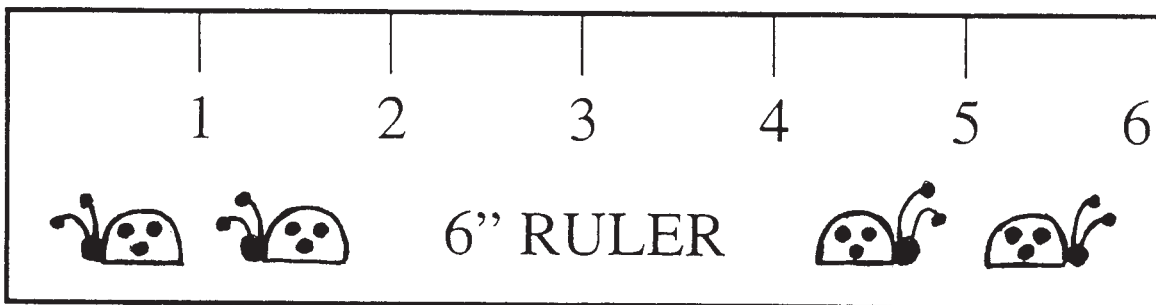
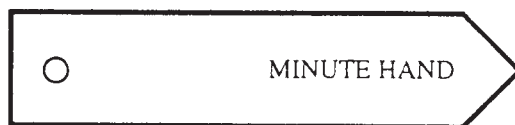
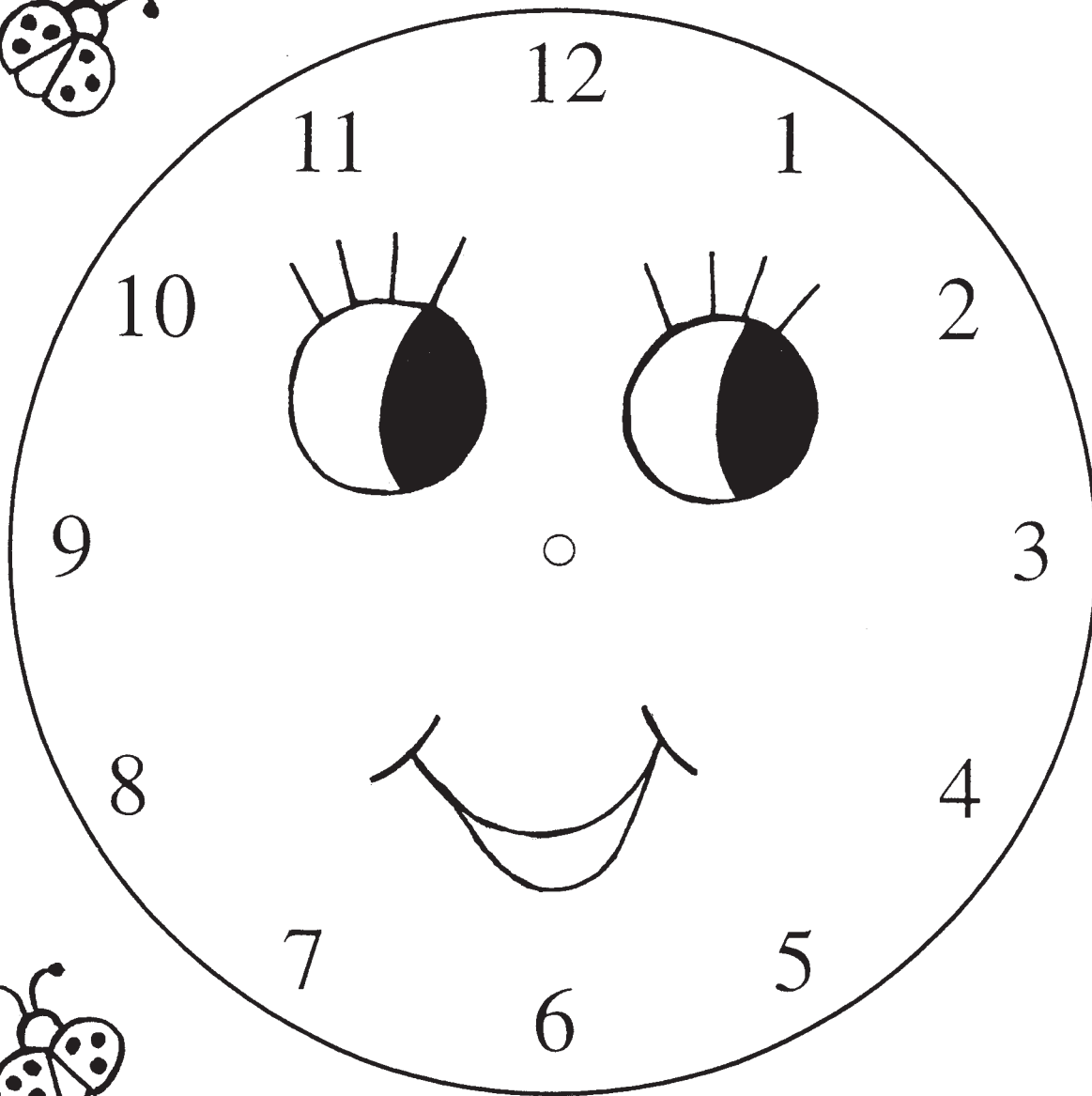
$$\begin{array}{r} 8 \\ -7 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ -7 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ -5 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ -3 \\ \hline \end{array}$$

Cutouts



Punch-Out Money



Punch-Out Money

