

Working with 10

Stories About 10

You need

- counters
- drawing paper

Take 10 counters. Separate them into two sets.



STEP 1 Counting Sets

How many counters do you have in all? _____

Does the total change when you move them around? _____

Explain your answer. _____

STEP 2 Telling Stories

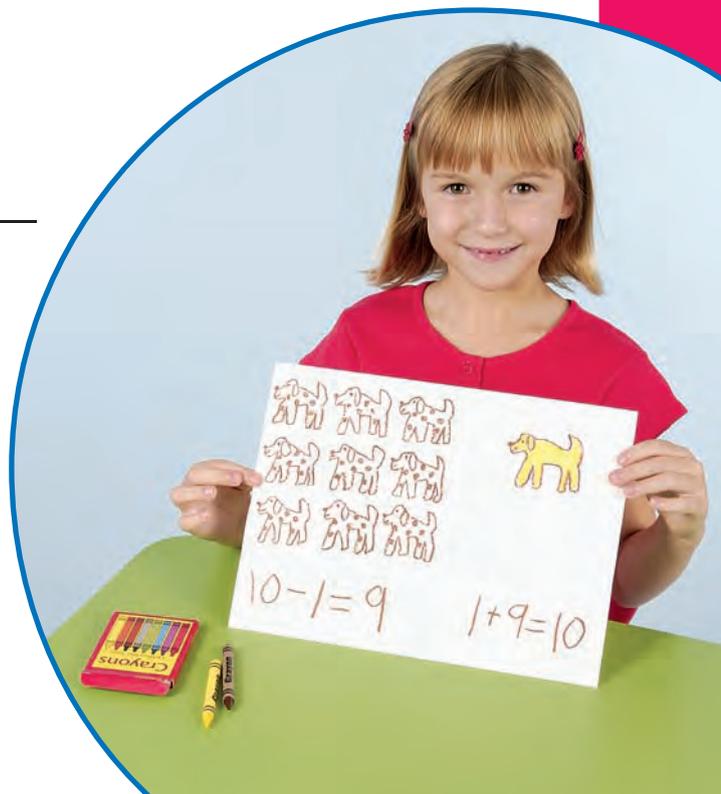
Write a number story about your two sets.
Draw a picture to show the story.

STEP 3 Recording Sentences

What number sentence can describe the sets?

What other number sentence can describe the same sets?

Investigation





School-Home Connection

Dear Family,

Today we started Chapter 2 of *Think Math!* In this chapter, I will work with number pairs that have a sum of 10 (such as $4 + 6$). I will also start at any number and add or subtract 10 and develop strategies to look at a number and tell how much more or less than 10 it is. There are NOTES on the Lesson Activity Book pages to explain what I am learning every day.

Here are some activities for us to do together at home. These activities will help me practice working with 10.

Love,

Family Fun

Fingers Up for 10!

Work with your child to add two numbers by making 10.

- Name two numbers from 5 to 10. Show one number with your fingers. Your child shows the other number. Make sure to use all of the fingers of one hand for the first 5 of each number.



- Add the two numbers by making 10. Put your hand of 5 with your child's hand of 5. This makes 10. Then add the rest of the fingers and add it to 10.



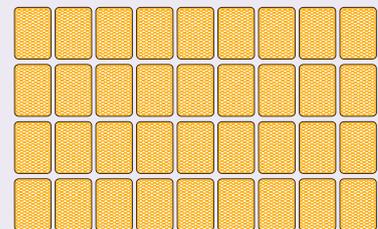
- Repeat several times with different pairs of numbers from 5 to 10.

X-Concentration

Work with your child to practice adding two numbers with a sum of 10.

- Gather a deck of playing cards and remove the 10s, jacks, queens, and kings.

- Mix the 36 cards. Place them face down in 4 rows of 9 like this.



- Take turns with your child. On each turn, a player turns two cards face up. If their sum is 10, the player takes the cards and goes again. The player continues until the pair does not add up to 10.
- Take turns until all cards are paired.
- As a variation, play with cards from only 2 suits.

Finding Sums of 10

NCTM Standards 1, 2, 6, 7, 8, 9, 10

I. Find different ways to put 10 counters in two sets. Record below.

--	--

0	10
---	----

 $0 + 10 = 10$

--	--

 $\underline{\quad} + \underline{\quad} = 10$

--	--

 $\underline{\quad} + \underline{\quad} = 10$

--	--

 $\underline{\quad} + \underline{\quad} = 10$

--	--

 $\underline{\quad} + \underline{\quad} = 10$

--	--

 $\underline{\quad} + \underline{\quad} = 10$

--	--

 $\underline{\quad} + \underline{\quad} = 10$

--	--

 $\underline{\quad} + \underline{\quad} = 10$

Use the same 10 counters each time.



--	--

 $\underline{\quad} + \underline{\quad} = 10$

--	--

 $\underline{\quad} + \underline{\quad} = 10$

--	--

 $\underline{\quad} + \underline{\quad} = 10$

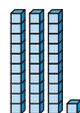
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 $\underline{\quad} + \underline{\quad} = 10$

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NOTE: Your child is learning all of the different addition sentences with a sum of 10.



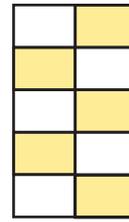
What is missing?

2.



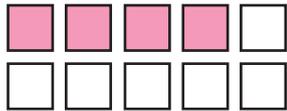
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

3.



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

4.



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

5.

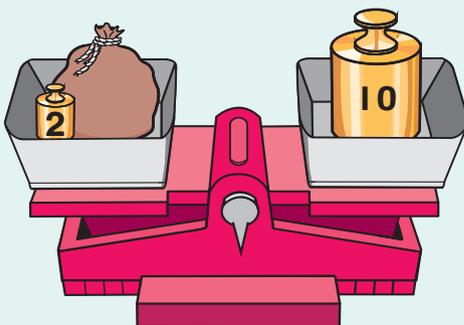


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Challenge

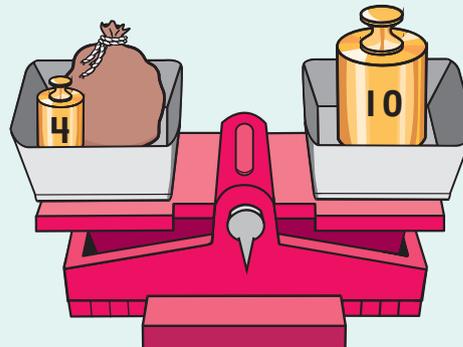
What is the value of  in each problem?

6.



$$\underline{\quad} + 2 = 10$$

7.



$$\underline{\quad} + 4 = 10$$

Introducing $>$ and $<$

NCTM Standards 1, 2, 6, 7, 8, 9, 10

Write $>$, $<$, or $=$. Make each sentence true.

1. $1 + 4$ $>$ $1 + 3$

2. $5 + 1$ \bigcirc $5 + 2$

3. $2 + 8$ \bigcirc $1 + 7$

4. $5 + 6$ \bigcirc $6 + 5$

5. $1 + 8$ \bigcirc $1 + 6$

6. $3 + 6$ \bigcirc $2 + 6$

7. $2 + 3$ \bigcirc $3 + 2$

8. $7 + 3$ \bigcirc $3 + 7$

9. $4 + 2$ \bigcirc $2 + 8$

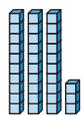
10. $6 + 5$ \bigcirc $5 + 5$

11. $4 + 5$ \bigcirc $1 + 3$

12. $6 + 5$ \bigcirc $7 + 5$



NOTE: Your child is learning to compare addition expressions using the symbols $<$, $>$, or $=$ to make each sentence true. $<$ means "is less than", $>$ means "is greater than", and $=$ means "is equal to."



What is missing? Make each sentence true.

13. $4 + 5 < 4 + \underline{\hspace{2cm}}$

14. $8 + 2 < 8 + \underline{\hspace{2cm}}$

15. $3 + 2 > \underline{\hspace{2cm}} + 2$

16. $5 + 3 > \underline{\hspace{2cm}} + 3$

17. $4 + 5 < \underline{\hspace{2cm}} + 5$

18. $1 + 6 > 1 + \underline{\hspace{2cm}}$

19. $2 + 7 > \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

20. $3 + 9 > \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

21. $7 + 8 < \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

22. $10 + 9 < \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

23. What addition expressions make the sentence true?

$7 + 4 > \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

$\underline{\hspace{2cm}} + \underline{\hspace{2cm}}$



Problem Solving

24. Ned has two stools. The metal stool is 5 inches tall. The wooden stool is 14 inches tall. On which stool can Ned stand higher? Explain.



Finding and Comparing Sums to 10

NCTM Standards 1, 2, 8, 9, 10

Sums Greater than 10 Search

- I. Which pairs make sums greater than 10?
Circle them as fast as you can.

5 5	5 6	5 7	4 4	4 6	7 4	7 3	4 7	2 8
--------	--------	--------	--------	--------	--------	--------	--------	--------

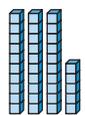
3 7	3 5	3 8	8 1	6 4	6 7	7 2	6 5	4 6
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4 7	2 7	7 3	9 0	1 9	2 9	1 8	3 6	6 5
--------	--------	--------	--------	--------	--------	--------	--------	--------

0 10	7 5	9 1	4 5	0 9	8 3	8 2	9 2	10 0
---------	--------	--------	--------	--------	--------	--------	--------	---------



NOTE: Your child is learning to identify number pairs with sums greater than 10 and compare addition problems to 10 or 20.



Write $>$, $<$, or $=$.

2. $10 < 7 + 5$

3. $20 \bigcirc 17 + 5$

4. $2 + 9 \bigcirc 10$

5. $12 + 9 \bigcirc 20$

6. $8 + 4 \bigcirc 10$

7. $8 + 14 \bigcirc 20$

8. $10 \bigcirc 3 + 7$

9. $20 \bigcirc 3 + 17$

10. $5 + 6 \bigcirc 2 + 8$

11. $15 + 6 \bigcirc 20$

12. $2 + 7 \bigcirc 10$

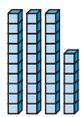
13. $2 + 17 \bigcirc 20$

Challenge

Write $>$, $<$, or $=$.

14. If $6 + 7 \bigcirc 10$, then $16 + 17 \bigcirc 30$.

15. If $8 + 2 \bigcirc 10$, then $18 + 12 \bigcirc 30$.



Mastering Sums of 10

NCTM Standards 1, 2, 6, 7, 8, 9, 10

Write $>$, $<$, or $=$. Make each sentence true.

1. $4 + 6$ $>$ $4 + 5$

2. $9 + 2$ \bigcirc $1 + 9$

3. $1 + 8$ \bigcirc $1 + 9$

4. $3 + 6$ \bigcirc $4 + 6$

5. $4 + 6$ \bigcirc $3 + 7$

6. $1 + 8$ \bigcirc $2 + 8$

7. $3 + 7$ \bigcirc $7 + 4$

8. $4 + 6$ \bigcirc $2 + 8$

9. $7 + 3$ \bigcirc $5 + 4$

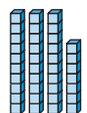
10. $1 + 3$ \bigcirc $1 + 9$

11. $8 + 3$ \bigcirc $2 + 8$

12. $5 + 5$ \bigcirc $6 + 5$



NOTE: Your child is memorizing the facts with a sum of 10. These facts will help him or her later to solve other facts.



What is missing? Make each sentence true.

13. $4 + 6 = 3 + \underline{\quad 7 \quad}$

14. $5 + 5 = 8 + \underline{\quad \quad}$

15. $1 + 9 = \underline{\quad \quad} + 8$

16. $7 + 3 = \underline{\quad \quad} + 7$

17. $5 + 5 < \underline{\quad \quad} + 5$

18. $9 + 1 > 1 + \underline{\quad \quad}$

19. $6 + 4 < \underline{\quad \quad} + 9$

20. $0 + 10 > 4 + \underline{\quad \quad}$

21. $\underline{\quad \quad} + 4 < 3 + 7$

22. $\underline{\quad \quad} + 6 > 3 + 7$



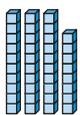
23. Make the sentence true. Explain your answer.

$2 + 8 < 2 + \underline{\quad \quad}$

Challenge

24. How can you make four number pairs with sums of 10? Draw lines to match the numbers below.

1 2 3 4 5 6 7 8 9



Adding and Subtracting with 10

NCTM Standards 1, 2, 6, 7, 8, 9, 10

Add 10. What number is missing?

1. $51 + 10 = \boxed{61}$

2. $4 + 10 = \boxed{}$

3. $32 + 10 = \boxed{}$

4. $\boxed{} + 10 = 79$

5. $28 + 10 = \boxed{}$

6. $\boxed{} + 10 = 26$

Move up
exactly
one row.



90	91	92	93	94	95	96	97	98	99
80	81	82	83	84	85	86	87	88	89
70	71	72	73	74	75	76	77	78	79
60	61	62	63	64	65	66	67	68	69
50	51	52	53	54	55	56	57	58	59
40	41	42	43	44	45	46	47	48	49
30	31	32	33	34	35	36	37	38	39
20	21	22	23	24	25	26	27	28	29
10	11	12	13	14	15	16	17	18	19
0	1	2	3	4	5	6	7	8	9

7.

20			77			95		
10	20	24	67	58	82	85	90	46

8. $85 + 10 = \boxed{}$

9. $\boxed{} + 10 = 20$

10. $90 + 10 = \boxed{}$

11. $\boxed{} + 10 = 56$

12. $20 + 10 = \boxed{}$

13. $24 + 10 = \boxed{}$

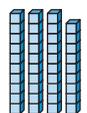
14. $82 + 10 = \boxed{}$

15. $58 + 10 = \boxed{}$

16. $\boxed{} + 10 = 77$



NOTE: Your child is learning to use a hundred grid to add and subtract 10 from any two-digit number.



Subtract 10. What number is missing?

17. $72 - 10 = \boxed{62}$

18. $30 - 10 = \boxed{}$

19. $91 - 10 = \boxed{}$

20. $\boxed{} - 10 = 33$

21. $\boxed{} - 10 = 14$

22. $85 - 10 = \boxed{}$

Move down exactly one row.



90	91	92	93	94	95	96	97	98	99
80	81	82	83	84	85	86	87	88	89
70	71	72	73	74	75	76	77	78	79
60	61	62	63	64	65	66	67	68	69
50	51	52	53	54	55	56	57	58	59
40	41	42	43	44	45	46	47	48	49
30	31	32	33	34	35	36	37	38	39
20	21	22	23	24	25	26	27	28	29
10	11	12	13	14	15	16	17	18	19
0	1	2	3	4	5	6	7	8	9

23.

24
14

29

72
62

85

17

43

30
20

91

90

Add and subtract.

24. $64 + 10 = \boxed{}$

$64 - 10 = \boxed{}$

25. $56 + 10 = \boxed{}$

$\boxed{} - 10 = 46$

26. $\boxed{} + 10 = 48$

$\boxed{} - 10 = 28$

Challenge

What is the missing number?

27.

	57		

28.

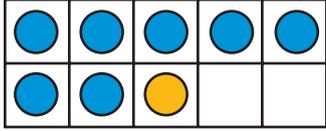
		34		

Finding How Close to 10

NCTM Standards 1, 2, 6, 7, 8, 9, 10

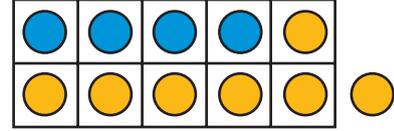
How close to 10 is the sum?

1. $7 + 1$



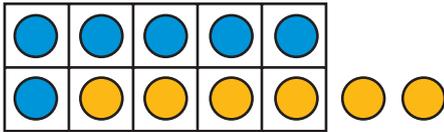
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2. $4 + 7$



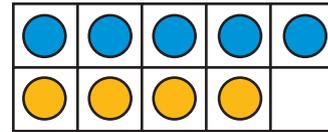
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3. $6 + 6$



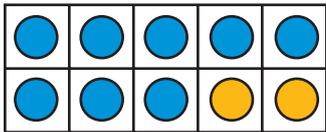
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4. $5 + 4$



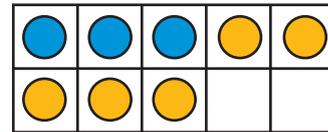
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5. $8 + 2$



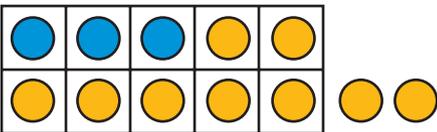
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6. $3 + 5$



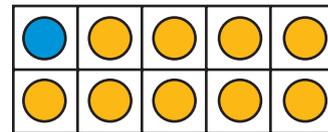
10

7. $3 + 9$



10

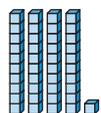
8. $1 + 9$



10

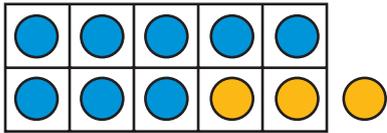


NOTE: Your child is learning to identify how close a sum is to 10. Ask him or her to explain the exercises on this page.

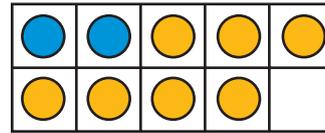


Make each sentence true.

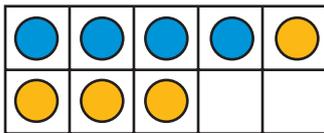
9. $8 + 3 = 10$



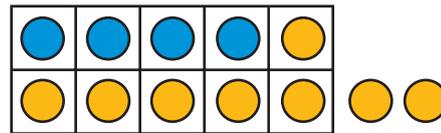
10. $2 + 7 = 10$



11. $4 + 4 = 10$



12. $4 + 8 = 10$



13. $9 + 3 = 10$

14. $8 + 1 = 10$

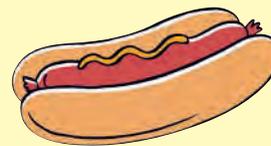
Make your own.

15. + = 10 + 1

16. + = 10 - 2

Problem Solving

17. Jill buys two packs of 10 hot dogs each. She serves 6 hot dogs on Friday and 6 on Saturday. How many hot dogs does she use from the second pack? Explain.



Adding Numbers by Making 10

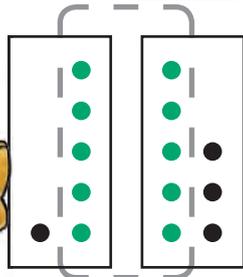
NCTM Standards 1, 2, 6, 7, 8, 9, 10

Rewrite each fact with a 10.

Make 10 with 5
 from each number.
 Then add what is
 left over.

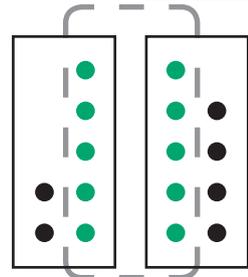


1. $6 + 8 = \boxed{14}$



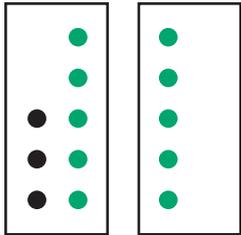
$10 + 4 = 14$

2. $7 + 9 = \boxed{}$

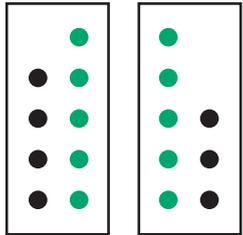


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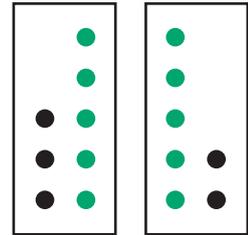
3. $8 + 5 = \boxed{}$



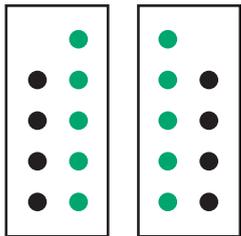
4. $9 + 8 = \boxed{}$



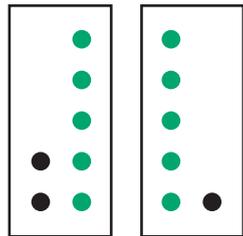
5. $8 + 7 = \boxed{}$



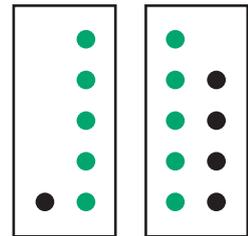
6. $9 + 9 = \boxed{}$



7. $7 + 6 = \boxed{}$

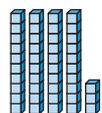


8. $6 + 9 = \boxed{}$





NOTE: Your child is learning a strategy to add two numbers by making 10 with a 5 from each number and then adding the remaining numbers to 10.



Add fives to find each sum. What is missing?

9. $6 + 9 =$

$$\begin{array}{r} 5 + \overset{1}{\underline{\quad}} = 6 \\ 5 + \overset{4}{\underline{\quad}} = 9 \\ 10 + \overset{5}{\underline{\quad}} = \boxed{15} \end{array}$$

10. $8 + 7 =$

$$\begin{array}{r} 5 + \underline{\quad} = 8 \\ 5 + \underline{\quad} = 7 \\ 10 + \underline{\quad} = \boxed{\quad} \end{array}$$

11. $9 + 5 =$

$$\begin{array}{r} 5 + \underline{\quad} = 9 \\ 5 + \underline{\quad} = 5 \\ 10 + \underline{\quad} = \boxed{\quad} \end{array}$$

12. $7 + 6 =$

$$\begin{array}{r} \underline{\quad} + \underline{\quad} = 7 \\ \underline{\quad} + \underline{\quad} = 6 \\ \underline{\quad} + \underline{\quad} = \boxed{\quad} \end{array}$$

13. $8 + 9 =$

$$\begin{array}{r} \underline{\quad} + \underline{\quad} = 8 \\ \underline{\quad} + \underline{\quad} = 9 \\ \underline{\quad} + \underline{\quad} = \boxed{\quad} \end{array}$$

14. $6 + 8 =$

$$\begin{array}{r} \underline{\quad} + \underline{\quad} = 6 \\ \underline{\quad} + \underline{\quad} = 8 \\ \underline{\quad} + \underline{\quad} = \boxed{\quad} \end{array}$$

 15. How many different ways can you solve $7 + 9$? Use words, numbers, or pictures to explain.

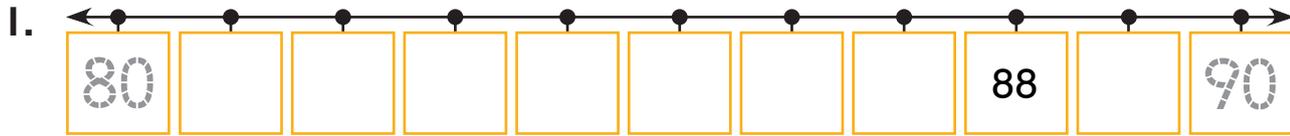
Problem Solving

16. Kat made 10 to solve $9 + 6$. She did not add fives. What strategy might she have used?

Rounding to the Nearest 10

NCTM Standards 1, 2, 6, 7, 8, 9, 10

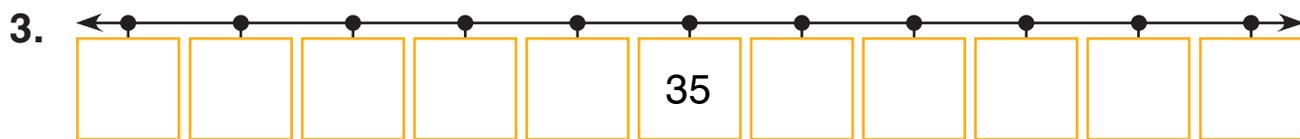
Write the tens that sandwich the number on each number line. Which is the nearest ten?



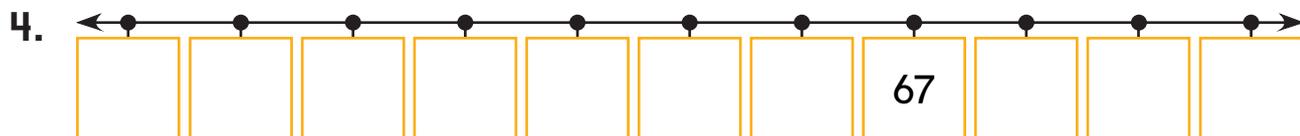
The nearest ten to 88 is 90.



The nearest ten to 24 is _____.



The nearest ten to 35 is _____.



The nearest ten to 67 is _____.

 5. What is the rule for rounding to the nearest ten? _____

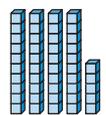


NOTE: Your child is learning a strategy to round two-digit numbers to the nearest multiple of ten. This skill may be used in various ways throughout mathematics.



XLV

forty-five



45

Make a sandwich with each number line. What number might come between the tens?

Write the number in position on the number line.



6. The nearest ten is 30.



7. The nearest ten is 50.



8. The nearest ten is 80.

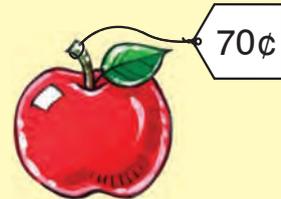


9. The nearest ten is 40. Write all possible numbers that could be rounded to 40.



Problem Solving

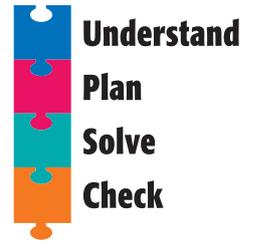
10. Daunte wants to buy an apple for 70¢. He has 67¢. He says he has enough money because 67 rounds to 70. Is he right? Use words, numbers, or pictures to explain.



Problem Solving Strategy

Solve a Simpler Problem

NCTM Standards 1, 2, 4, 6, 7, 8, 9, 10



1. Karen made 2 dozen cookies. Jim made 4 fewer cookies than Karen. How many cookies did they make altogether?
How did you find the answer?

_____ cookies

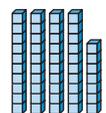
2. Karen gave 8 cookies to Sasha and 5 to her brother. Jim gave 9 cookies to Oleg and 6 to his sister. Who gave away more cookies, Karen or Jim?
How did you find the answer?

3. There are 53 tiles on the floor. It takes 1 minute to paint each tile. How many minutes will it take to paint the entire floor?
How did you find the answer?

_____ minutes



NOTE: Your child is exploring different ways to solve problems. Sometimes solving a simpler problem is an efficient way to solve a problem.



Problem Solving Test Prep

1. Sue practices her violin for 3 hours each day. In how many days will she practice for a total of 12 hours?

- (A) 36 days
- (B) 15 days
- (C) 9 days
- (D) 4 days

2. Cliff has 2 coins. Both coins are the same. Which amount could he NOT have as the total?

- (A) 10¢
- (B) 20¢
- (C) 40¢
- (D) 50¢



Show What You Know

3. Raj, Bev, and Al are running a race. One person comes in first place, one in second, and one in third place. How many different ways can they finish the race?

_____ ways

Explain how you found the answer.

4. Pia saw birds and dogs at the pet store. She saw 4 heads and 12 feet. How many of each animal did she see?

_____ birds _____ dogs

Explain how you know.

Chapter 2

Review/Assessment

NCTM Standards 1, 2, 6, 7, 8, 9, 10

What is missing? Lesson 1

1.



_____ + _____ = _____

2.



_____ + _____ = _____

Write >, <, and =. Lessons 2, 3

3. $1 + 5$ ○ $1 + 2$

4. $10 + 6$ ○ 20

What is missing? Make each sentence true. Lesson 4

5. $8 + 2 < 3 +$ _____

6. _____ $+ 3 < 4 + 6$

Add or subtract 10. What number is missing? Lesson 5

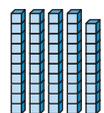
7. $68 + 10 =$ _____

8. _____ $+ 10 = 33$

9. $75 - 10 =$ _____

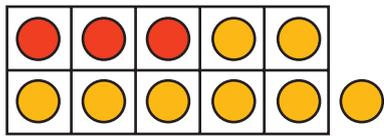
10. _____ $- 10 = 41$

90	91	92	93	94	95	96	97	98	99
80	81	82	83	84	85	86	87	88	89
70	71	72	73	74	75	76	77	78	79
60	61	62	63	64	65	66	67	68	69
50	51	52	53	54	55	56	57	58	59
40	41	42	43	44	45	46	47	48	49
30	31	32	33	34	35	36	37	38	39
20	21	22	23	24	25	26	27	28	29
10	11	12	13	14	15	16	17	18	19
0	1	2	3	4	5	6	7	8	9



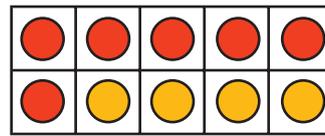
How close to 10 is the sum? Lesson 6

11. $3 + 8$



10

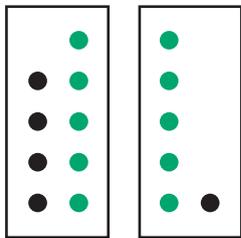
12. $6 + 4$



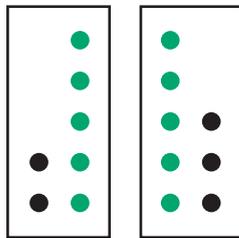
10

Rewrite each fact with a 10. Lesson 7

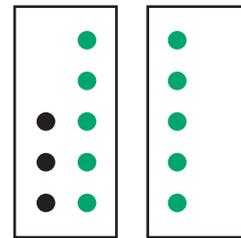
13. $9 + 6 = ?$



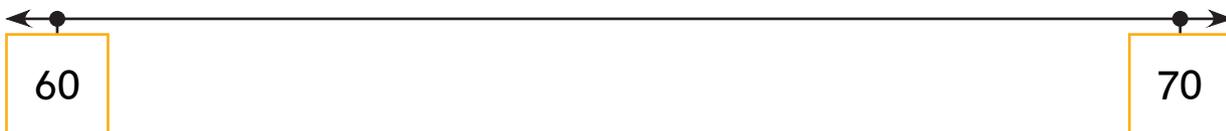
14. $7 + 8 = ?$



15. $8 + 5 = ?$



16. What number might come between the tens?
The nearest ten is 70. Lesson 8



Problem Solving Lesson 9

17. Maya's grade at school has 90 students.
Her brother's grade has 70 students.
How many students are in the two grades together? _____ students
How did you find the answer?