

Name _____

Comparing Numbers, Temperatures, and Weights

Numbers on a Thermometer



STEP 1 Estimating

How does the air feel inside?

Take a look outside.
How do you think the air feels outside?

STEP 2 Observing

Look at the numbers on a thermometer.
What pattern do you see?

STEP 3 Comparing

Is the temperature outside warmer than, cooler than,
or about the same as the temperature inside?

How would the thermometer change if you
brought it to a place that is cooler?

Investigation





School-Home Connection

Dear Family,

Today we started Chapter II of *Think Math!* In this chapter, I will learn to compare numbers, temperatures, and weights. I will learn to read a thermometer and to use a balance scale. 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 learn to compare and order numbers and to compare weights of objects.

Love,

Family Fun

Larger and Smaller

Work with your child to identify numbers that are larger and smaller than a given number.

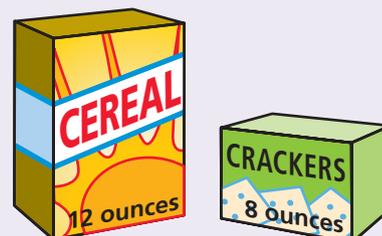
- Write a one- or two-digit number on a piece of paper. Display the number and have your child read it aloud.
- To the left of your number, have your child write a number that is smaller. To the right of your number, have your child write a number that is larger. Invite your child to explain how he or she chose the numbers.
- Repeat for other one- and two-digit numbers.



Heavy and Light

Work with your child to compare the weights of packaged household products.

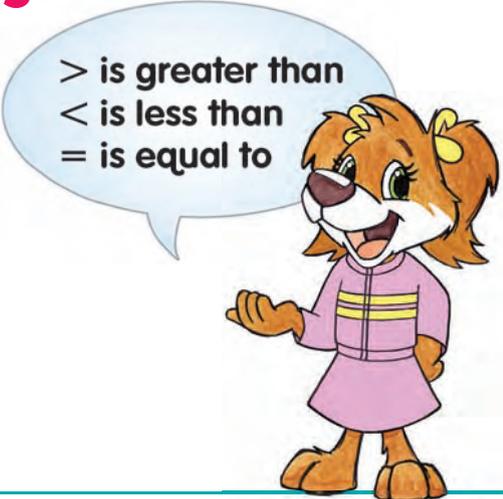
- Have your child choose two packaged foods from your kitchen and feel the weight of each package.
- Ask your child to guess which package is heavier.
- Then point out the weights of the packages. Have your child tell which weight is greater. Then ask whether his or her guess was correct.



Comparing Groups

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

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



1.

2.

3.

4.

5.

How many are there? Write $>$, $<$, or $=$.

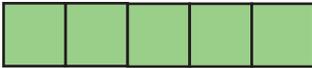
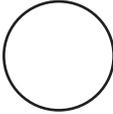
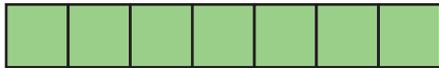
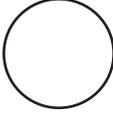
6.

7.



NOTE: Your child is learning to compare sets of objects. Ask your child to make two piles of pennies or paper clips and then to tell which pile has more.

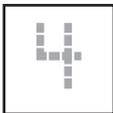
8. Write $>$, $<$, or $=$.

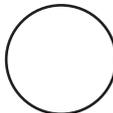


9. How can you use numbers and symbols to compare the strips in Problem 8?

What is missing?

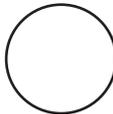
10. 3 

11. 12 

12. $3 + 5$  $1 + 5$

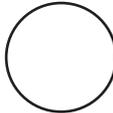
13. 13  13

14. 9  7

15. $7 + 4$  $4 + 7$

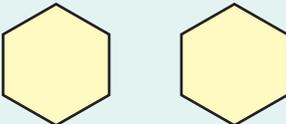
16.  < 7

17.  > 10

18. $2 + 8$  $2 + 5$

Challenge

19. If  8

and  10 then

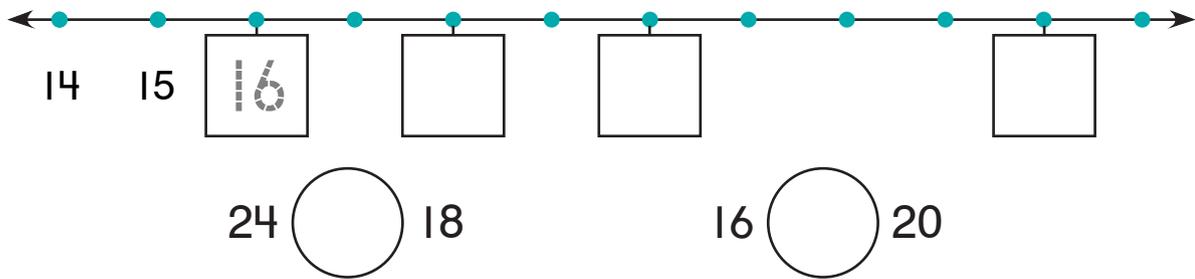
what could  be? _____

Comparing Numbers and Temperatures

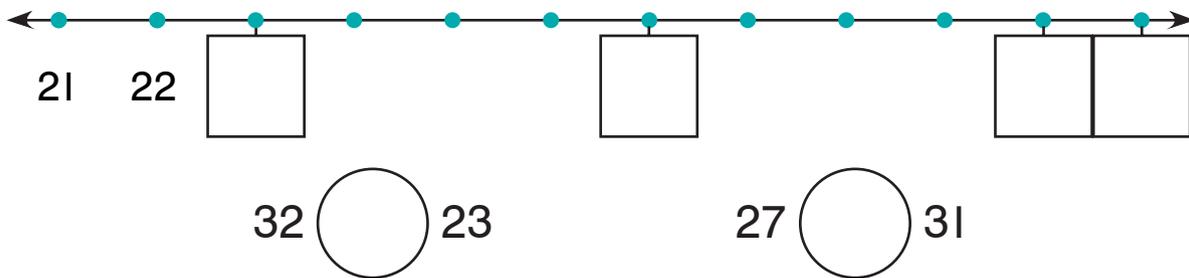
NCTM Standards 1, 2, 4, 6, 7, 8, 9, 10

What numbers are missing?
Write $<$, $>$, or $=$.

1.

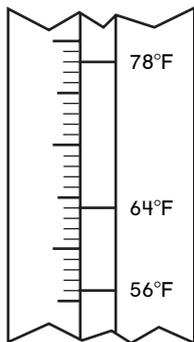


2.



Write $<$ or $>$.

3.

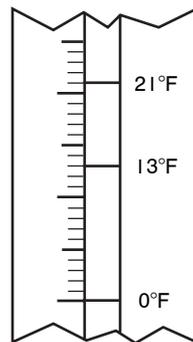


78°F ○ 64°F

56°F ○ 64°F

78°F ○ 56°F

4.



21°F ○ 0°F

0°F ○ 13°F

13°F ○ 21°F



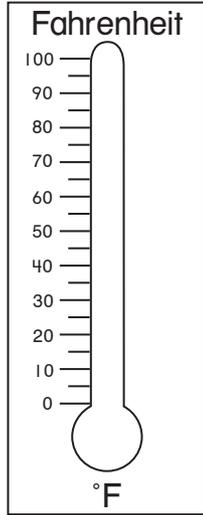
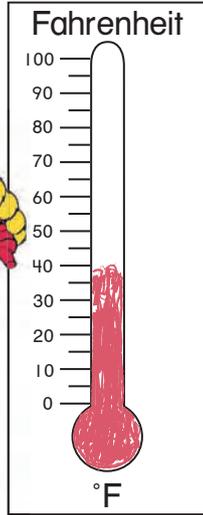
NOTE: Your child is comparing numbers on a number line and on a thermometer. Ask your child to explain how he or she chose which symbol to write in the problems on this page.

Color to show each temperature.
Circle the hotter temperature.

5.

60°F

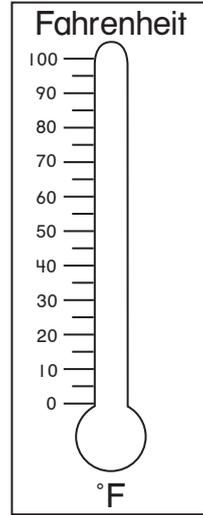
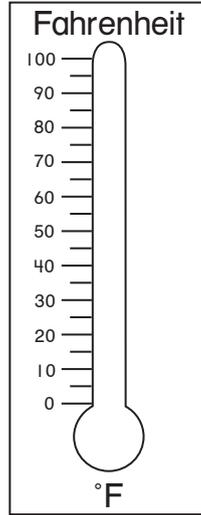
40°F



6.

75°F

85°F



Problem Solving

7. It is 55°F where Jacob lives.
It is 87°F where Ethan lives.
Which boy is Jacob and which is Ethan?



Using Place Value to Compare Numbers

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

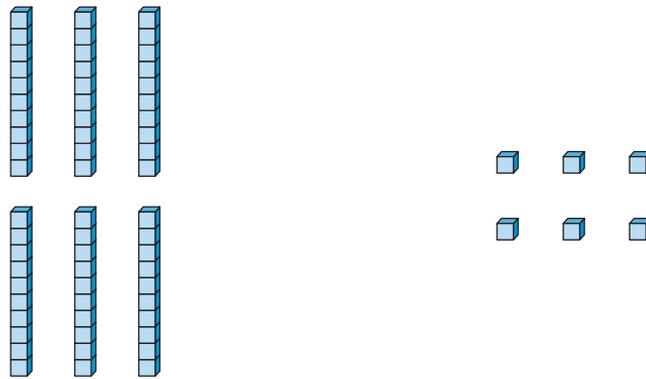
What numbers are shown? Write $<$, $>$, or $=$.

1.



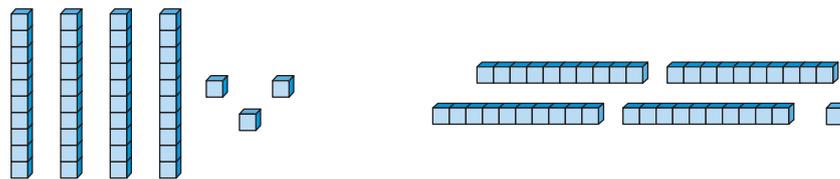
 ○

2.



 ○

3.

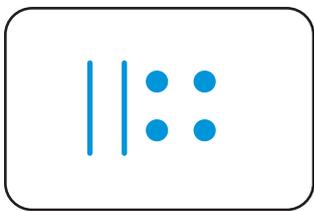


 ○

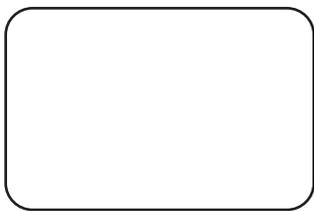


NOTE: Your child is learning to compare two-digit numbers. Ask your child to explain how he or she completed Problem 3 above.

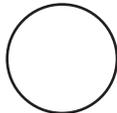
4. Draw a picture to show each number.
Write $<$, $>$, or $=$.



24



16



You can draw
for rods and
• for units.



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

5. 63 \bigcirc 36

6. 45 \bigcirc 45

7. 18 \bigcirc 81

8. 28 \bigcirc 82

9. 93 \bigcirc 39

10. 68 \bigcirc 68

11. 8 \bigcirc 21

12. 79 \bigcirc 79

13. 19 \bigcirc 7

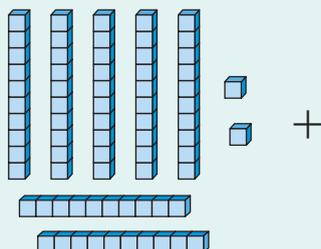
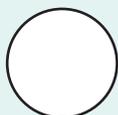
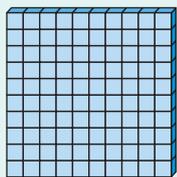
14. 25 \bigcirc 29

15. 51 \bigcirc 38

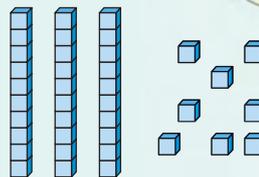
16. 32 \bigcirc 6

Challenge

17. What numbers are shown?
Write $<$, $>$, or $=$.



+



You can
trade
for 10 .



Ordering Numbers

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

Compare and order the numbers.
Write the missing symbols and numbers.

1.



$$15 \bigcirc 12 \qquad 12 \bigcirc 7 \qquad 15 \bigcirc 7$$

$$\square < \square < \square$$

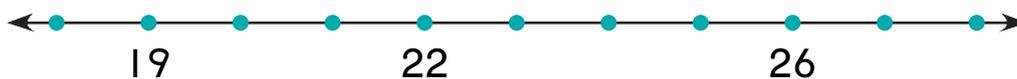
2.



$$38 \bigcirc 41 \qquad 41 \bigcirc 46 \qquad 38 \bigcirc 46$$

$$\square > \square > \square$$

3.



$$19 \bigcirc 22 \qquad 26 \bigcirc 22 \qquad 26 \bigcirc 19$$

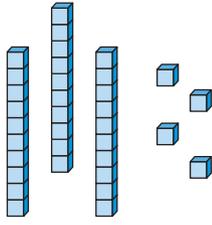
$$\square \bigcirc \square \bigcirc \square$$



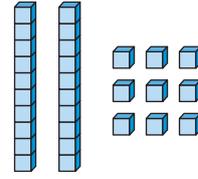
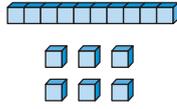
NOTE: Your child is continuing to compare two-digit numbers. This lesson introduces ordering three numbers from smallest to largest or from largest to smallest.

Write the numbers.
Then order the numbers.

4.

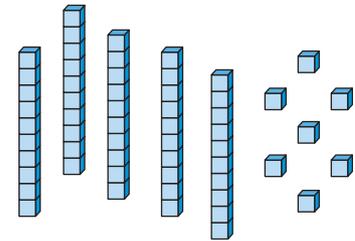
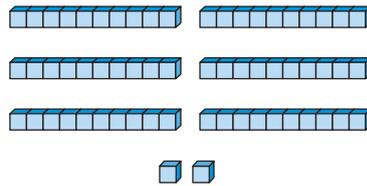
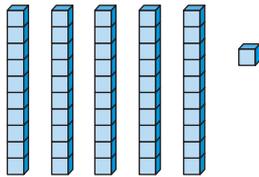


34



< <

5.



> >

Problem Solving

6. There are more apples than bananas. So, $a > b$.
There are fewer cherries than bananas. So $c < b$.
Which is true?

- (A) $a < c$ (B) $a > c$ (C) $a = c$ (D) You can't tell.

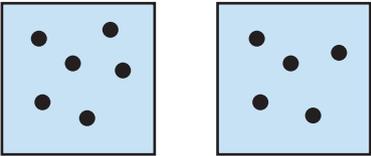
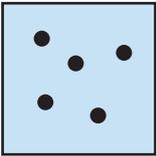
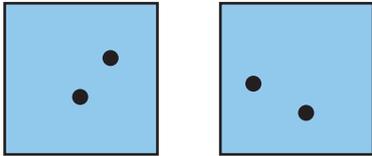
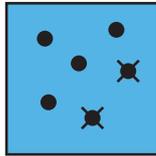
 Explain how you know. _____



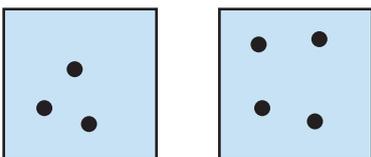
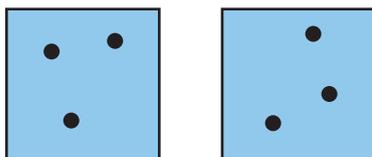
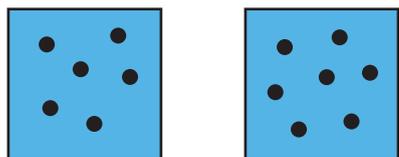
Changing Both Sides of a Sentence

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

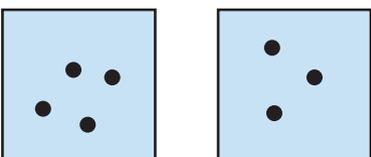
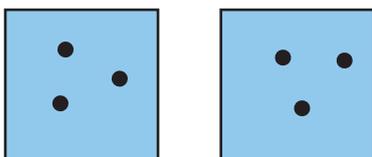
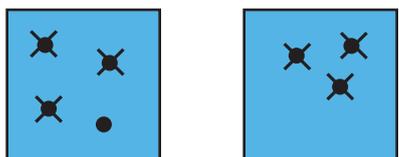
Write $<$, $>$, or $=$.

1.   and  so  

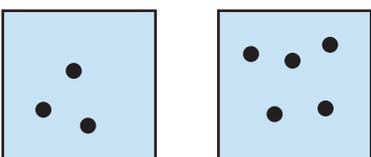
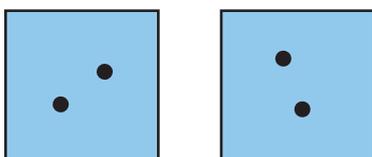
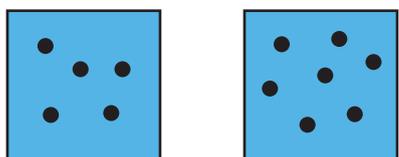
6 $>$ 5 and 2 $=$ 2 so $6 - 2 = 5 - 2$

2.  and  so 

3 $<$ 4 and 3 $=$ 3 so $3 + 3 = 4 + 3$

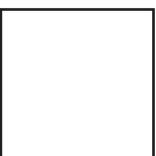
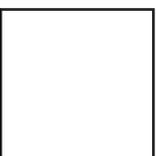
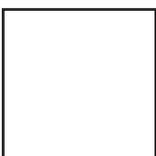
3.  and  so 

4 $>$ 3 and 3 $=$ 3 so $4 - 3 = 3 - 3$

4.  and  so 

3 $<$ 5 and 2 $=$ 2 so $3 + 2 = 5 + 2$

5. Make your own.

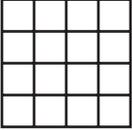
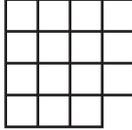
  and   so  

 \bigcirc  and  \bigcirc  so  \bigcirc 

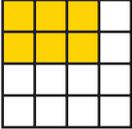
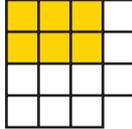


NOTE: Your child is learning what happens when the same number is either added to or subtracted from both sides of a number sentence.

What are the missing numbers and symbols?

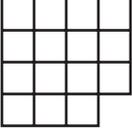
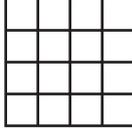
6.    

$\boxed{16} > \boxed{15}$ and $\boxed{6} \bigcirc \square$

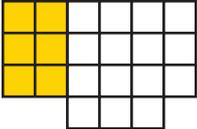
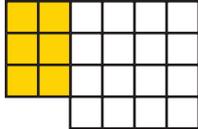
so  

$\boxed{16} - \boxed{6} \bigcirc \square - \square$

$\square \bigcirc \square$

7.    

$\square \bigcirc \square$ and $\square \bigcirc \square$

so  

$\square + \square \bigcirc \square + \square$

$\square \bigcirc \square$

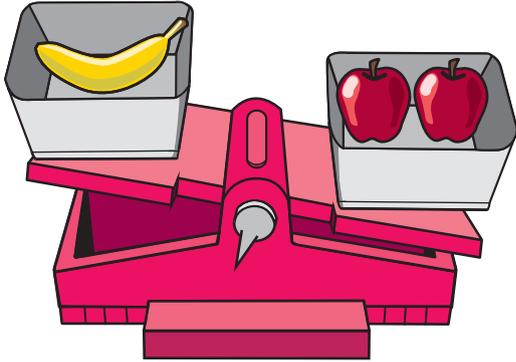
Comparing and Ordering Weights

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

Which words make the sentence true?

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

1. The banana is lighter than the apples.

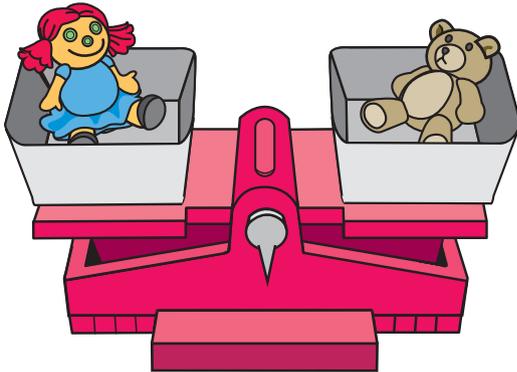


is heavier than

weighs the same as

banana $<$ apples

2. The doll is lighter than the teddy bear.

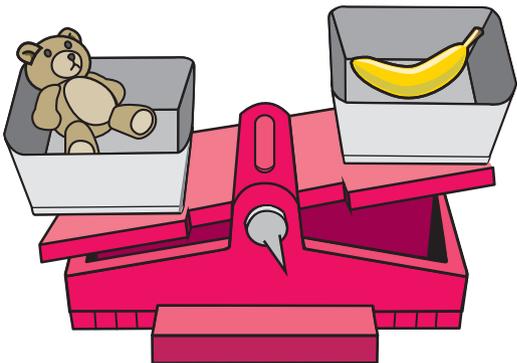


is heavier than

weighs the same as

doll $=$ bear

3. The teddy bear is lighter than the banana.



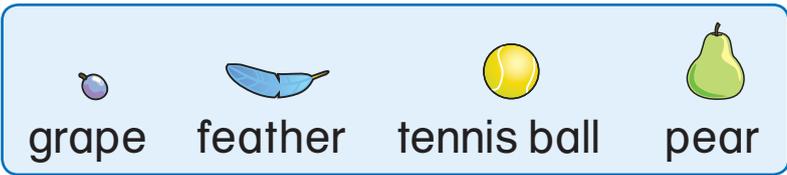
is heavier than

weighs the same as

bear $>$ banana

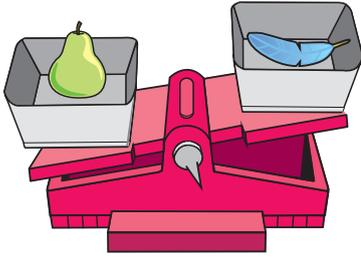


NOTE: Your child is learning to use a pan balance to compare the weights of objects. Ask your child how he or she knew which object was heavier.



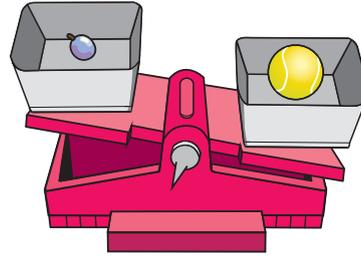
Write $<$, $>$, or $=$.

4.



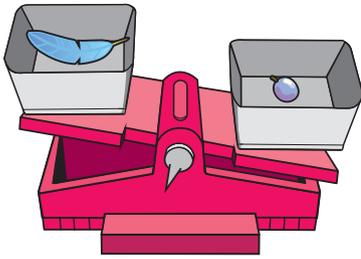
pear feather

5.



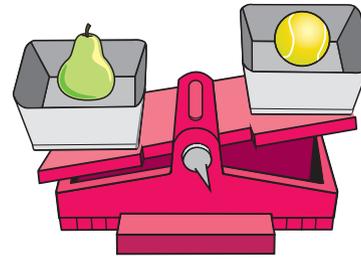
grape tennis ball

6.



feather grape

7.



pear tennis ball

8.

pear grape

9.

feather tennis ball

10. Circle the lightest.



11. Circle the heaviest.



Problem Solving

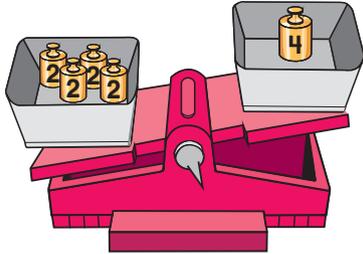
12. Mari has three boxes.
 Box A is heavier than Box B.
 Box C is lighter than Box B.
 List the boxes in order from lightest to heaviest.

Changing Both Pans of a Balance

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

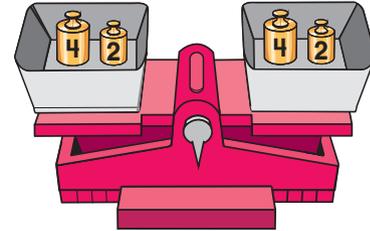
What are the missing symbols and numbers?

1.



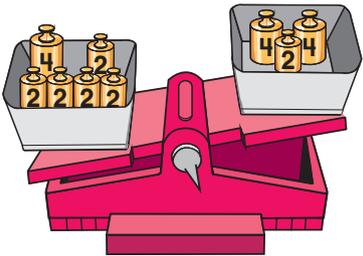
8 oz 4 oz

and



6 oz 6 oz

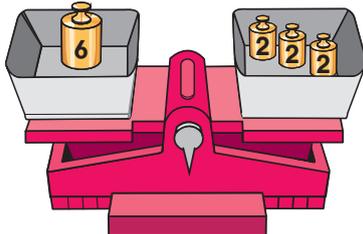
so



8 oz + 6 oz 4 oz + 6 oz

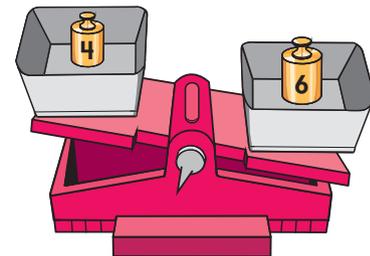
_____ oz _____ oz

2.



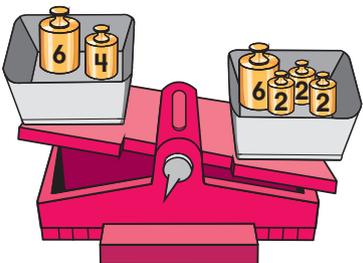
_____ oz _____ oz

and



_____ oz _____ oz

so



_____ oz + _____ oz _____ oz + _____ oz

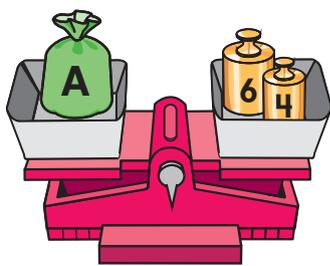
_____ oz _____ oz



NOTE: Your child is exploring what happens when the same weight is added to both pans of a balance scale. Your child uses logic to determine which pan is heavier.

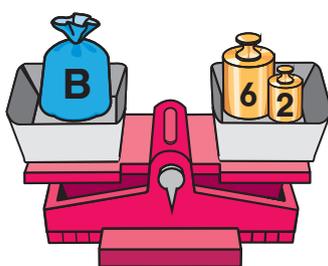
How much does each bag weigh?

3.



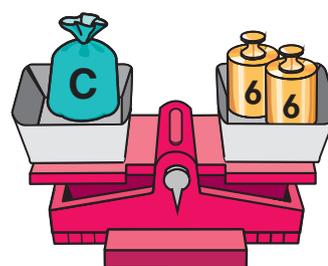
A weighs 10 oz.

4.



B weighs _____ oz.

5.



C weighs _____ oz.

Use the weights above.

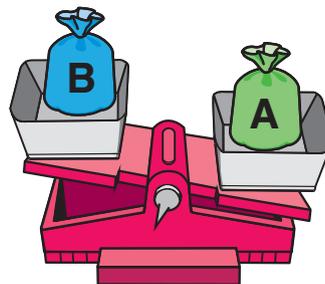
What are the missing numbers and symbols?

6.



_____ oz ○ _____ oz

7.



_____ oz ○ _____ oz

8. Circle the heaviest bag.

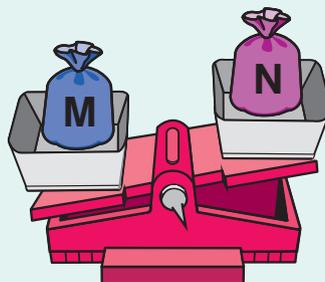


9. Circle the lightest bag.



Challenge

Look at the balances at the right.



10. Circle the heaviest bag.



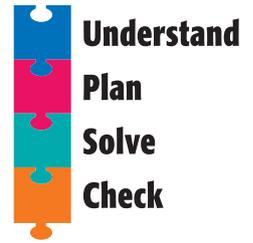
11. Circle the lightest bag.



Problem Solving Strategy

Guess and Check

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

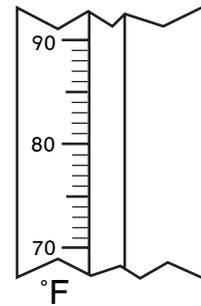


1. Tanya has 10 fruits in a basket. She has apples, bananas, and cherries. The sentences at the right show how they compare. How many of each fruit could Tanya have?

apples $>$ bananas
 cherries $>$ bananas
 cherries $<$ apples

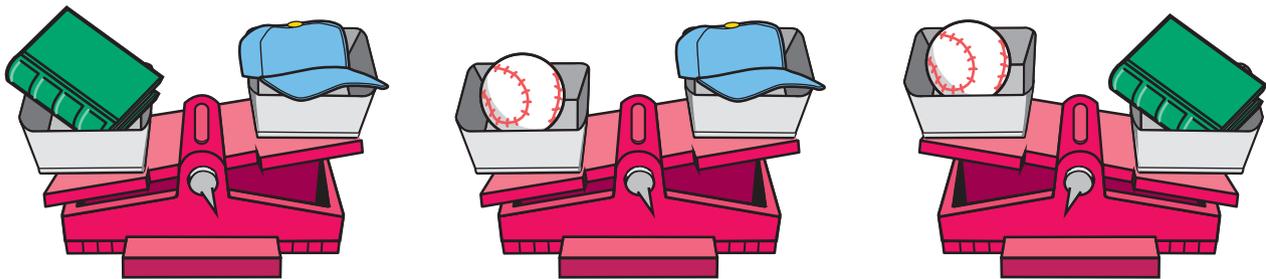
_____ apples _____ bananas _____ cherries

2. The temperature was 83°F on Monday. It was 4°F cooler on Tuesday than on Monday. It was warmer on Wednesday than Tuesday. What could the temperature have been on Wednesday?



_____ $^{\circ}\text{F}$

3. Theo used pan balances to compare how much his book, cap, and ball weigh.



List the objects in order from lightest to heaviest.

_____, _____, _____



NOTE: Your child is using the strategy, *guess and check*, to solve problems. Ask your child to explain how he or she solved the problems on this page.

Problem Solving Test Prep

1. Scott left the library at 5:30. He spent 2 hours there. What time did Scott get to the library?

- (A) 2:30 (C) 7:00
(B) 3:30 (D) 7:30

2. Tina made a pattern.



What are the next two figures in her pattern?

- (A) (C)
(B) (D)

Show What You Know

3. Madison lines up 4 blocks.

- The red block is left of the green block.
- The yellow block is right of the blue block.
- The green block is left of the blue block.

List the blocks in order from left to right.

Explain how you know your answer is correct.

4. Jenny has 4 cards to decorate. She wants to put 4 stickers on each card. She has 14 stickers. Does Jenny have enough stickers?

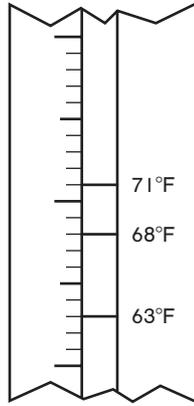
Use words, numbers, or pictures to explain how you know.

Chapter 11

Review/Assessment

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

I. Write $<$ or $>$. Lesson 2



$68^{\circ}\text{F} \bigcirc 71^{\circ}\text{F}$

$63^{\circ}\text{F} \bigcirc 68^{\circ}\text{F}$

$71^{\circ}\text{F} \bigcirc 63^{\circ}\text{F}$



Write $<$, $>$, or $=$. Lessons 1 and 3

$2. \quad 9 \bigcirc 12$

$3. \quad 18 \bigcirc 22$

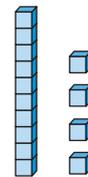
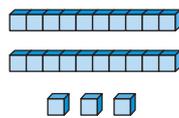
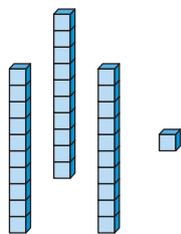
$4. \quad 37 \bigcirc 37$

$5. \quad 52 \bigcirc 39$

$6. \quad 46 \bigcirc 39$

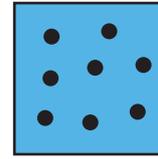
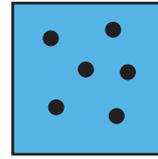
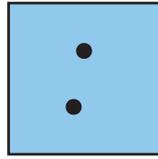
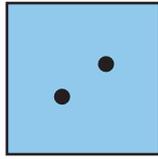
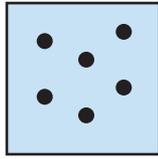
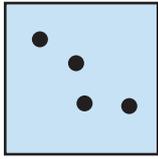
$7. \quad 15 \bigcirc 51$

8. Write the numbers.
Then order the numbers. Lesson 4



$\square < \square < \square$

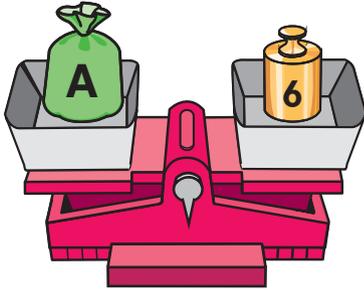
9. Write $<$, $>$, or $=$. Lesson 5



4 ○ 6 and 2 ○ 2 so $4 + 2$ ○ $6 + 2$

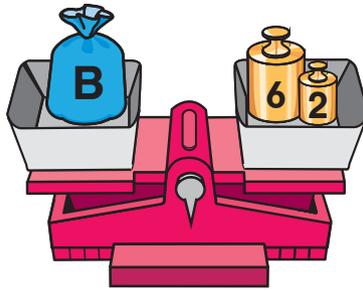
How much does each bag weigh? Lessons 6 and 7

10.



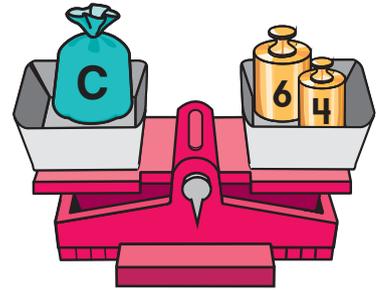
A weighs _____ oz.

11.



B weighs _____ oz.

12.



C weighs _____ oz.

13. Circle the heaviest bag.



14. Circle the lightest bag.



Problem Solving Lesson 8

15. Dan has 7 pets.
He has dogs, cats, and fish.
The sentences tell how they compare.
- dogs $<$ cats
 - cats $>$ fish
 - fish = dogs

How many of each pet could he have?

_____ dogs _____ cats _____ fish

