

• Reading Scales

Power Up

facts

Power Up F

count aloud

Count by 12s from 12 to 60.

mental math

- a. **Time:** How many months are in 2 years? ... 3 years?
... 4 years?
- b. **Time:** How many days are in 2 weeks? ... 3 weeks?
... 4 weeks?
- c. **Number Sense:** 10×24
- d. **Number Sense:** 6×24
- e. **Fractional Parts:** $\frac{1}{2}$ of 100¢
- f. **Fractional Parts:** $\frac{1}{4}$ of 100¢
- g. **Fractional Parts:** $\frac{3}{4}$ of 100¢
- h. **Number Sense:** $6 \times 6, - 1, \div 5$

problem solving

Choose an appropriate problem-solving strategy to solve this problem. Use the digits 5, 6, 7, 8, and 9 to complete this subtraction problem:

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New Concept

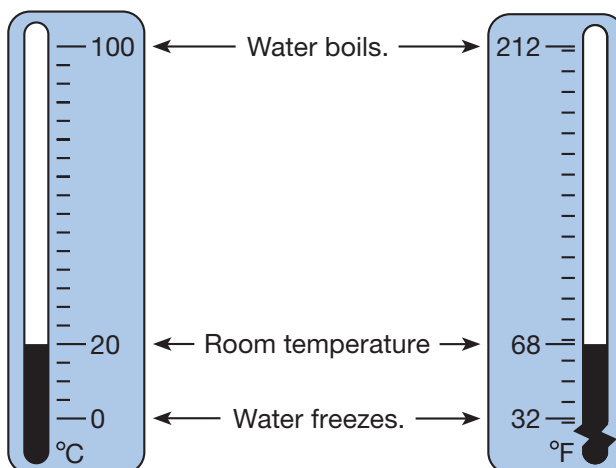
Thinking Skill

Connect

Name some real-world examples of number lines that have been adapted for different measuring situations.

Number lines can be horizontal, vertical, or even curved. It is not necessary to show every whole number on a number line. Some number lines show only even numbers or numbers we say when counting by 5s. The locations of unlabeled numbers must be figured out.

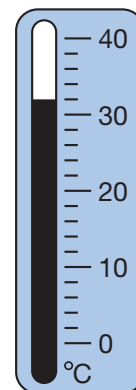
One use of a number line is as a **scale** for measuring temperature. Two commonly used temperature scales are the **Fahrenheit** (F) scale and the **Celsius** (C) scale. On the Fahrenheit scale, water freezes at 32°F and boils at 212°F. The Celsius scale is a **centigrade** scale, meaning there are one hundred gradations, or **degrees**, between the freezing and boiling points of water. On the Celsius scale, water freezes at 0°C and boils at 100°C.



Example 1

At 6:00 a.m. the temperature was 21°C. The thermometer shows the noon temperature. How many degrees did the temperature increase from 6:00 a.m. to noon?

This thermometer indicates the temperature in degrees Celsius which is abbreviated “°C.” On the scale, only every 10° is labeled. There are five spaces between every 10°. That means every space equals 2°. One space up from 30° is 32°. The thermometer shows a temperature of 32°C.

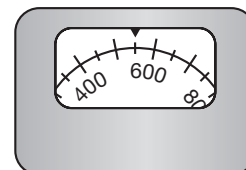


$$32 - 21 = 11$$

The temperature rose **11°C**.

Example 2

To what number on this scale is the arrow pointing?



As we move along the curve toward the right, we see that the numbers grow larger. The arrow points to a location past the 400 mark and near the 600 mark. Halfway between the 400 and 600 marks is a long mark that stands for 500. The arrow points halfway between the 500 and 600 marks, so it points to **550**.

Example 3

Draw a horizontal number line from 0 to 500 with only zero and hundreds marked and labeled.

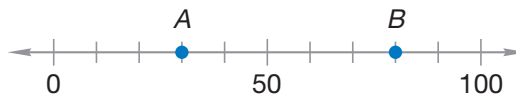
We draw a horizontal number line and make marks for 0, 100, 200, 300, 400, and 500. These marks should be evenly spaced. We then label the marks. Our number line should look like this:



Estimate Is the point for 276 closer to 200 or 300?

Lesson Practice

- Represent** Draw a number line from 0 to 100 with only zero and tens marked and labeled.
- On the Celsius scale, what temperature is five degrees less than the freezing point of water?
- Represent** Points *A* and *B* on this number line indicate two numbers. Write the two numbers and use a comparison symbol to show which is greater and which is less.



Written Practice

Distributed and Integrated

Formulate For problems 1–4, write an equation and find the answer.

- ⁽¹¹⁾ On the first 3 days of their trip, the Smiths drove 408 miles, 347 miles, and 419 miles. Altogether, how far did they drive in 3 days?
- ⁽¹⁷⁾ T'Wan is 5 feet tall. One foot is equal to 12 inches. How many inches tall is T'Wan?

3. Fifteen minutes after the store opened, only seven autographed footballs remained in the store. If customers had purchased 27 autographed footballs during the first 15 minutes, how many autographed footballs were in the store when it opened?

***4.** Gabriella sold 9 cups of lemonade for \$0.15 each. How much money did Gabriella collect by selling lemonade?

5. Colvin's age is half of Mahmood's age. If Mahmood is 12 years old, then how old is Colvin?

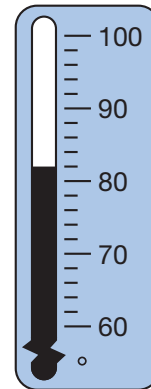
6. $864 \div 5$

***7.** $\$2.72 \div 4$

8. $608 \div 9$

9. $378 \div (18 \div 3)$

***10.** The thermometer shows the high temperature for a day. The low temperature of the day was 13° lower. What was the low temperature for that day?

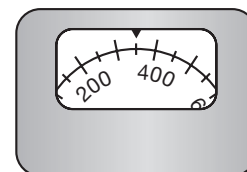


***11.** $\$52.60$
 $\times \quad 7$

12. 3874
 $\times \quad 6$

13. 9063
 $\times \quad 8$

14. To what number on this scale is the arrow pointing?



15. $386 + 4287 + 672 + m = 5350$

16. **Represent** Draw a horizontal number line from 0 to 50 with only zero and tens marked and labeled.

17. Multiple Choice The number 78 is between which of these pairs of numbers?

- A** 60 and 70 **B** 70 and 80 **C** 80 and 90 **D** 0 and 10

18. **List** Write the factors of 30.
(25)

19. When three hundred ninety-seven is subtracted from four hundred five, what is the difference?
(5, 9)

*20. **Multiple Choice** In Khadija's class there is one more boy than there are girls. Which could *not* be the number of students in Khadija's class?
(2)

A 25 B 27 C 28 D 29

21. On the Celsius scale, what temperature is ten degrees below the freezing point of water?
(27)

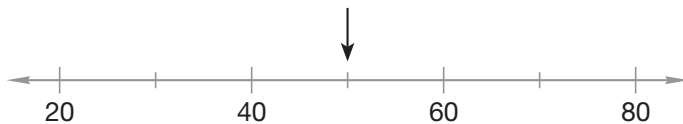
22. **Conclude** What are the next three terms in this counting sequence?
(1)

..., 160, 170, 180, ____, ____, ____, ...

23. Which digit in 537 shows the number of hundreds?
(3)

24. **Represent** Use words to name 327,040.
(7)

*25. **Represent** To what number is the arrow pointing?
(27)



26. Show three ways to write "24 divided by 3" with digits and division symbols.
(20)

27. **Evaluate** Here is Madeline's answer to a division problem. Show how to check the division. Is Madeline's answer correct? Why or why not?
(26)

$$\begin{array}{r} 14 \text{ R } 2 \\ 7 \overline{)100} \end{array}$$

28. Compare: $12 \div (6 \div 2) \bigcirc (12 \div 6) \div 2$
(20, 24)

Does the Associative Property apply to division?

*29. The fraction $\frac{3}{10}$ is equivalent to what decimal?
(Inv. 2)

30. The relationship between centimeters and millimeters is shown in the table.

(1)

Number of Centimeters	1	2	3	4
Number of Millimeters	10	20	30	40

- a. **Generalize** Write a rule that describes how to find the number of centimeters for any number of millimeters.
- b. **Predict** How many centimeters represent the same distance as 100 millimeters?

Early Finishers

Real-World Connection

The thermometer shows the starting temperature of water in a wading pool. If the temperature drops 2° every hour, what will the water temperature be after six hours?