Name _____ Date/Time _____

Measuring Temperature

What is the temperature?

1
— 40°F
Freezing —
— 30°F
— 20°F

42 °F

2
Freezing —
— 30°F
— 20°F
— 10°F

☐ °F

3
Freezing —
— 30°F
— 20°F
— 10°F

☐ °F

4

Monday
— 40°F
Freezing —
— 20°F

☐ °F
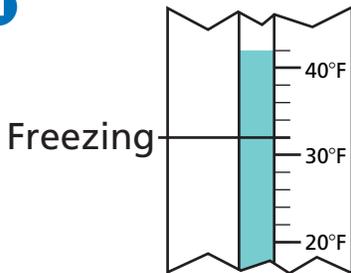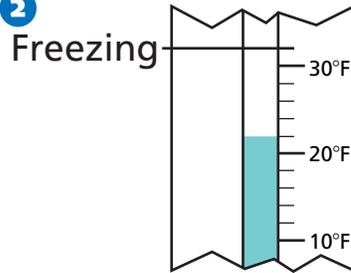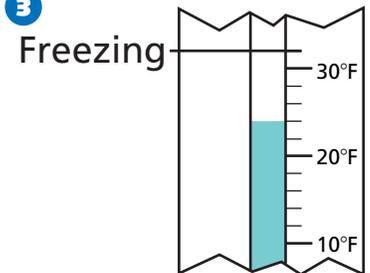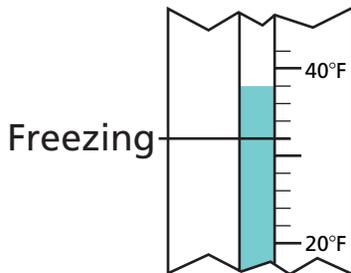
Tuesday
— 40°F
Freezing —
— 20°F
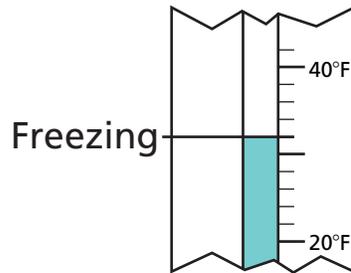
☐ °F

Which day was warmer?

_____

How much warmer?

☐ F

5

Thursday
— 40°F
Freezing —
— 20°F

☐ °F
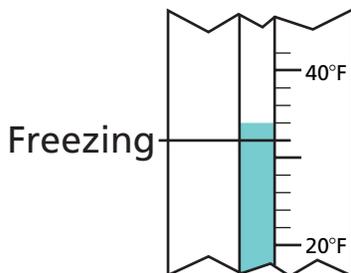
Friday
— 40°F
Freezing —
— 20°F
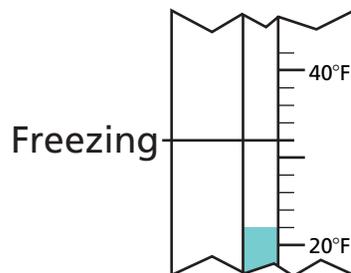
☐ °F

Which day was colder?

_____

How much colder?

☐ F

**A very cold day in Minnesota . . .**

6 The temperature on the thermometer is _____ F.

7 The difference between the temperature

on the thermometer and **15 F** is _____ F.

8 **10 F** colder than this thermometer is _____ F.

9 **20 F** hotter than this thermometer is _____ F.

10 **8 F** above freezing is _____ F.

11 **40 F** above freezing is _____ F.

12 **32 F** below freezing is _____ F.

Freezing

40°F
30°F
20°F
18°F
16°F
14°F
12°F
10°F
0°F
10°F
20°F
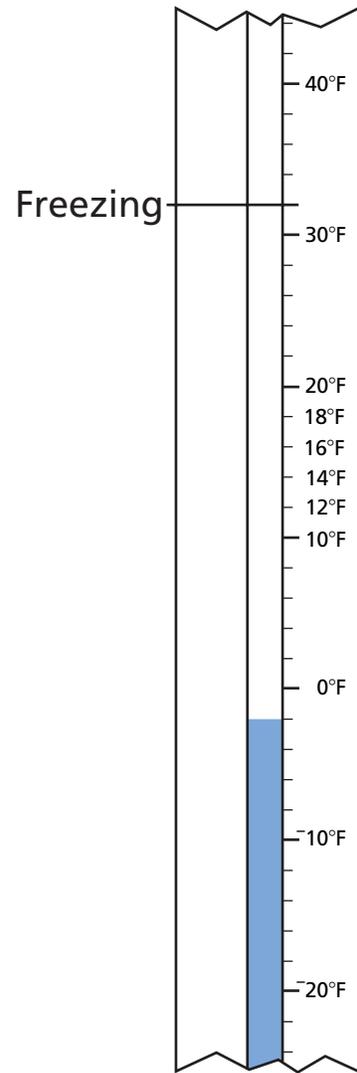
The thermometer above shows the temperature at 6:00 A.M. The temperature is rising 4 F every hour.

13 **Challenge** What will the temperature be in 6 hours?

_____ F

14 **Challenge** What will the time be when the temperature is **10 F**?

Draw the hands on the clock.
Write the time.

11 12 1
10   2
9   3
8   4
7 6 5

_____

Name _____   Date/Time _____
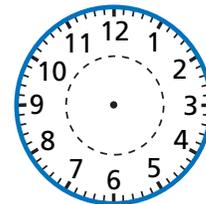
Measuring Time
NCTM Standards 1, 4, 6, 7, 9, 10

Write the time shown on each clock.

1

15 minutes later → 30 minutes later →

3:30   :   :

2

1 hour earlier → 30 minutes earlier →

:   :   :

3

30 minutes earlier → 15 minutes earlier →

:   :   :

4

45 minutes later → 45 minutes later →

:   :   :
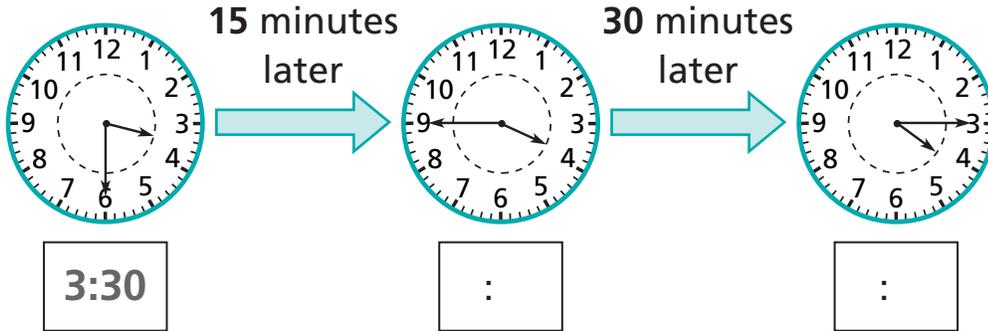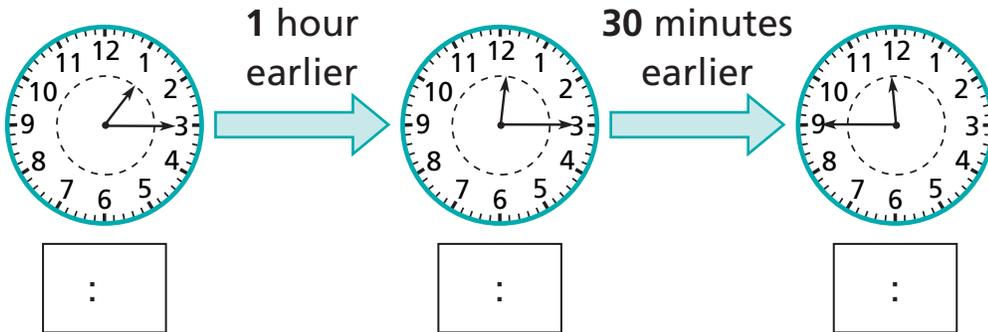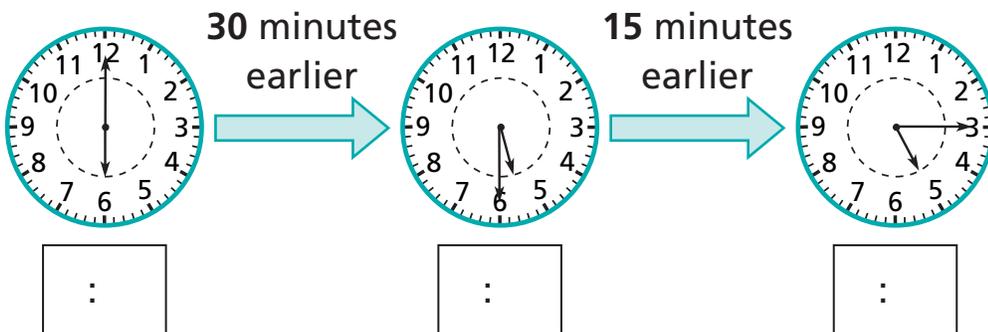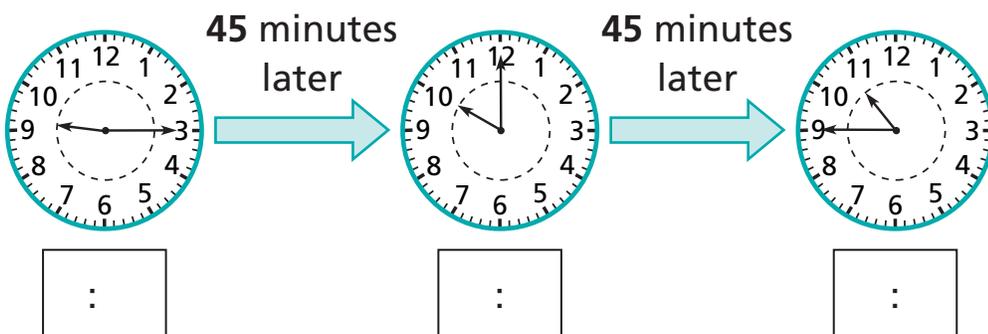
Draw the hands for each clock.

5

	30 minutes later		**45 minutes later**	

| 11:15 | | 11:45 | | 12:30 |

6

	45 minutes earlier		**45 minutes earlier**	

| 8:15 | | 7:30 | | 6:45 |

7

	15 minutes later		**30 minutes later**	

| 6:20 | | 6:35 | | 7:05 |

---
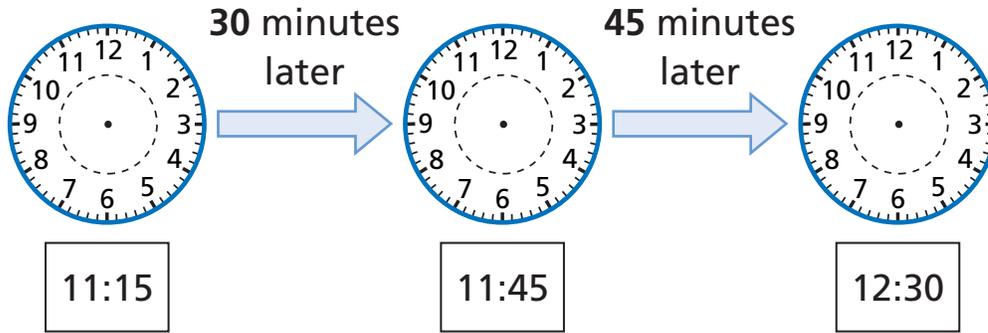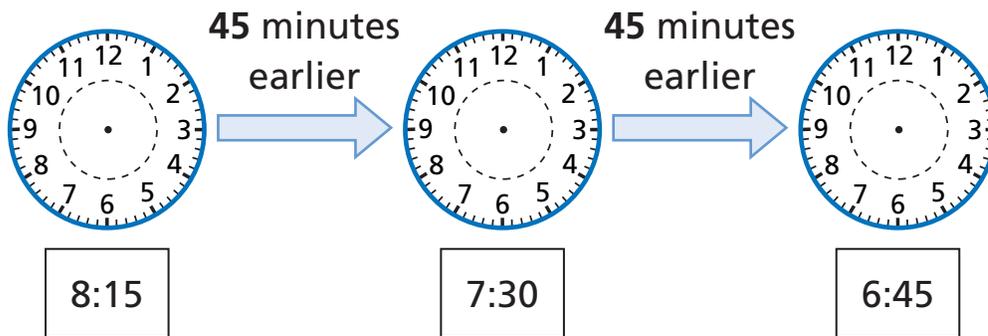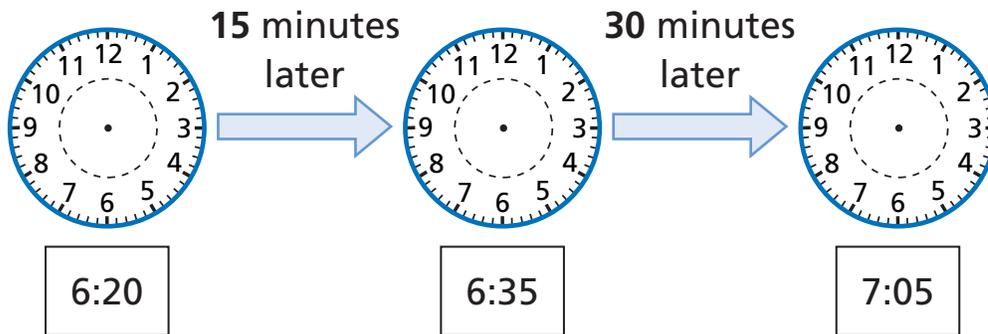
8 Challenge Write the missing number. Draw the clock hands. Write the times.

	45 minutes later		☐ **minutes later**	

| : | | : | | 4:00 |

Name _____   Date/Time _____
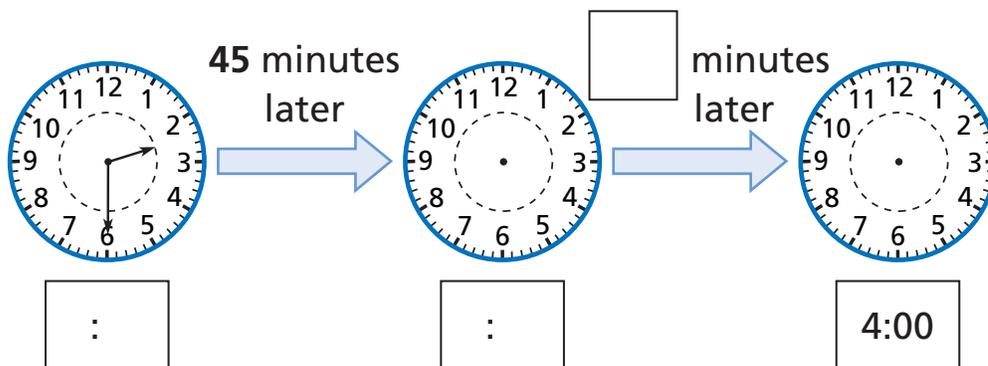
Comparing Times

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

Write the missing time and draw the clock hands.

1   [clock] :   **3** hours **15** minutes
earlier →   [clock] :
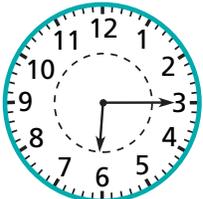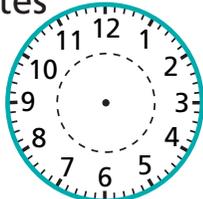
2   [clock] 10:45   **2** hours **30** minutes
later →   [clock] :
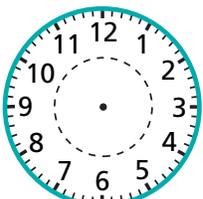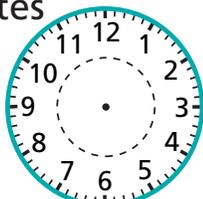
For the pair of clocks, write the missing numbers and words above the arrow.
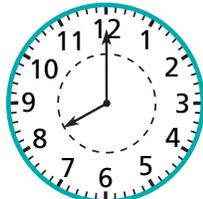
3   [clock] 8:00   ___ hours
___ **0** minutes
later
→   [clock] 11:00
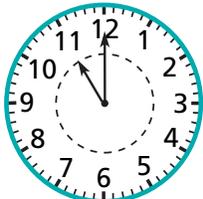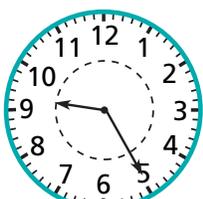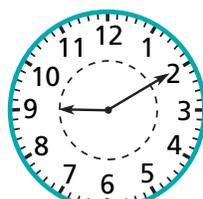
4   [clock] 9:25   ___ hours
___ minutes
→   [clock] 9:10

Fill in the missing times, clock hands, words, and numbers.

5

8:15

___ hours
___ minutes

:

___ 1 hours
15 minutes
earlier

2:45

2 hours
30 minutes
earlier

:

:

___ hours
___ minutes
_____

---

6 At 12:30 Mark said, "I've been cleaning my room for 1 hour and 45 minutes." What time did Mark start cleaning?

____:____

---

7 Challenge Fill in the missing word, numbers, clock hands, and times.

___ hours
___ minutes
_____

1 hour **15** minutes
earlier

8:45

:

:

Name _____ Date/Time _____

Weight in Ounces, Pounds, and Tons

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

Draw a line to match each object to its weight.
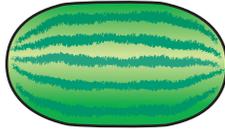
1 1 watermelon   **1 ounce**

2 1 fully loaded truck   **8 ounces**
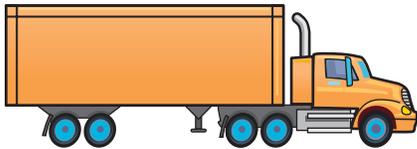
3 1 apple   **16 ounces**

4 1 pound of fruit salad   **10 pounds**

5 Morty, the produce clerk   **165 pounds**

6 Morty's car   **1 ton**
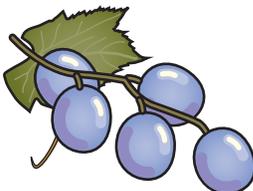
7 5 grapes   **40 tons**

Convert pounds to ounces. Remember that 1 pound (1 lb) equals 16 ounces (16 oz).

8   2 lb _____ oz   **9**   4 lb _____ oz

10   3 lb _____ oz   **11**   5 lb _____ oz

12 Complete the table.

Ounces	Pounds and Ounces
26 oz	_____ lb, _____ oz
55 oz	_____ lb, _____ oz
_____ oz	**4** lb, **6** oz
_____ oz	**6** lb, **4** oz
116 oz	_____ lb, _____ oz
_____ oz	**13** lb, **8** oz

13 **Challenge** Label the bags in order from lightest to heaviest.

Name _____ Date/Time _____
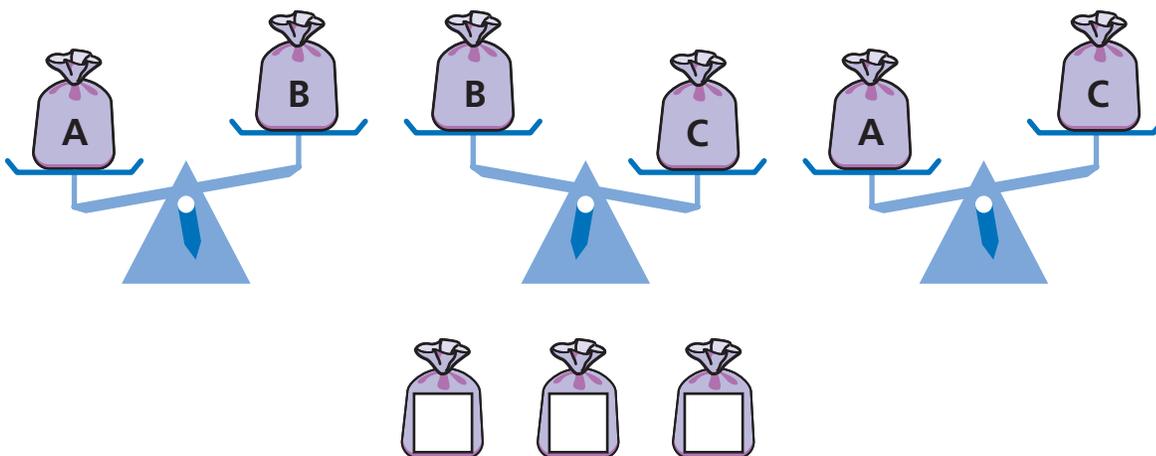
Weighing to Solve Problems

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

Fill in the blanks.

1 Dana used a scale and found out that the dictionary in her classroom weighed **4** lb, **5** oz or _____ oz.

___

2 How much would **2** dictionaries weigh?

_____ lb,   _____ oz   or   _____ oz

___

3 How much would **10** dictionaries weigh?

_____ lb,   _____ oz   or   _____ oz

___

4 If a shelf can't hold more than **20 pounds,** what is the largest number of dictionaries you could put on the shelf?

_____ dictionaries weighing   _____ lb,   _____ oz,   or   _____ oz

___

5 About how many dictionaries are there in a **ton** of dictionaries? Explain how you found your estimate.

_____

_____

_____

_____

_____

Find the weight. All bags with the same label have the same weight.

6
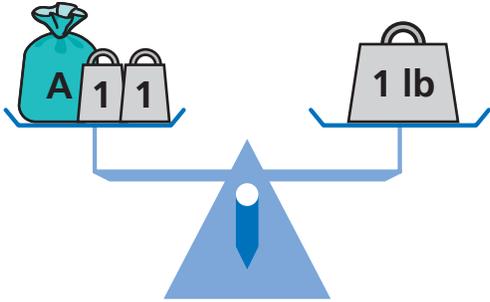
A weighs _____ lb, _____ oz.

7
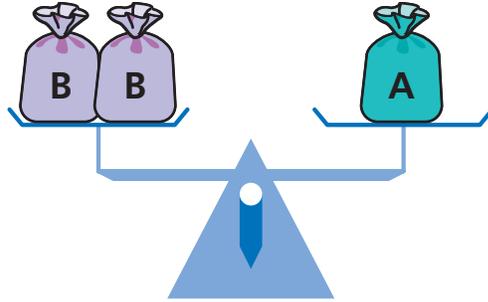
B weighs _____ lb, _____ oz.

8
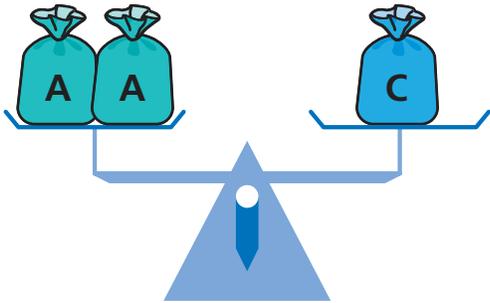
C weighs _____ lb, _____ oz.

9
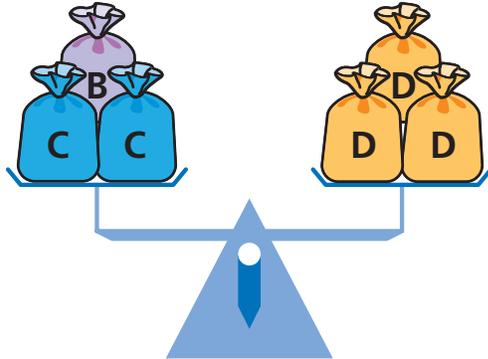
D weighs _____ lb, _____ oz.

10
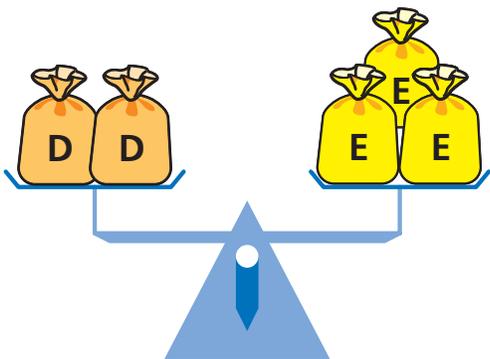
E weighs _____ lb, _____ oz.

11 Challenge
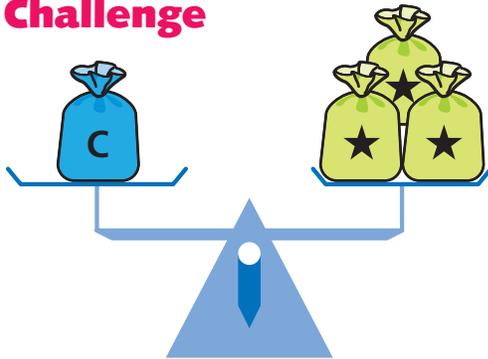
★ weighs _____ lb, _____ oz.

Chapter 13
Lesson 6 **Measuring Capacity**
NCTM Standards 1, 4, 6, 7, 8, 9, 10

1 Complete the table.
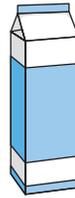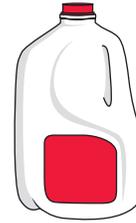
cup   **pint**   **quart**   **gallon**

Container	Cups	Fluid Ounces
1 cup	1 cup	8 fl oz
half pint	1 cup	
pint (2 half pints is 1 pint)		
quart (2 pints is 1 quart)		
half gallon (2 quarts is 1 half gallon)		
gallon (2 half gallons is 1 gallon)		

Keesha had a gallon jug of apple cider. She poured out four 12 fl oz glasses of apple cider and wanted to put the rest of the apple cider in a half-gallon pitcher.

2 How much apple cider is left in the jug? _____

3 Will it all fit in the half-gallon pitcher? Explain.

_____

Solve. Explain your answer.

✏️ **4** Seven people might each want a 6-ounce glass of juice. Shawn wants to make sure he has enough. How many quart containers of juice should he buy?

_____

_____

✏️ **5** Cara read that it is a good idea to drink about 8 cups of water each day. If she drinks all of her water from pint bottles, how many bottles will she drink in a week?

_____

_____

✏️ **6** Darius uses 2 cups of milk to make 6 servings of his famous cheese sauce. If he has to make enough cheese sauce to serve 100 people, how many gallons of milk does he need?

_____

_____

7 Clarice Cow can produce 9 gallons of milk in a day. If the farmer puts half of Clarice's milk into half-pint containers and the rest into quart containers, how many of each type of container are filled each day?

_____ half pints

_____ quarts

8 **Challenge** Liu is using an 8-ounce container to fill a bird bath that holds 1 gallon of water. It takes her 30 seconds to fill the container and walk from the faucet to the bird bath and back. If she begins at 8:00 A.M., when will the bird bath be full?

_____

_____

Chapter 13
Lesson 7

Weight and Capacity

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

Use the information to estimate your answer.

1 A fluid ounce of water weighs a little more than an ounce. About how much does a cup of water weigh?

_____

_____

2 When you have a lot of water, that little bit of extra weight for each fluid ounce can really add up. In a gallon of water, that extra adds up to about **5 ounces** in weight. About how much does a gallon of water weigh?

_____

_____

3 **Two ounces** of popped popcorn fill a **7-cup** bowl. If you want **28 cups** of popcorn for a party, how many ounces do you need?

_____

_____

4 About how many cups of popcorn weigh **1 pound?**

_____

_____

A cup of a mystery liquid weighs a little more than 6 oz. A 5-gallon can weighs about 7 lb when it is empty.

**5** How much does the can weigh when it is full of the mystery liquid?

5 gallons   _____ cups

_____ cups of the liquid weigh a bit more than _____ oz.

_____ oz   _____ lb (_____ oz   10 lb)

_____ lb   7 lb   _____ lb

6 If the can weighs 22 lb, how much liquid is in it?

_____

_____

_____

_____

7 **Challenge** Lead is a material that can be melted and poured into molds to form weights like fishing sinkers. Lead is so dense that a cup of melted lead would weigh almost 6 lb. About how much does 1 fluid ounce of melted lead weigh?

_____

_____

_____

_____

Name _____ Date/Time _____

Analyzing Temperature Data

The thermometers show the temperatures at 7 P.M. in Nome, Alaska for 5 nights in December. Fill in the temperatures.
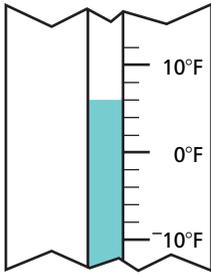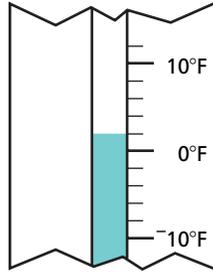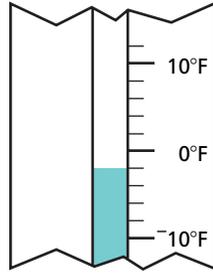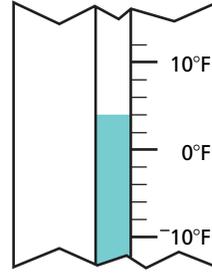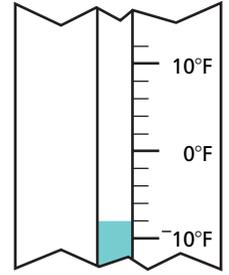
1	2	3	4	5
_____ °F	_____ °F	_____ °F	_____ °F	_____ °F
Monday	Tuesday	Wednesday	Thursday	Friday

6 Which day had the **warmest** temperature at 7 P.M.? _____

7 Which day had the **coldest** temperature at 7 P.M.? _____

8 Over the five-day period, was the temperature **increasing, steady, decreasing,** or **variable?** _____

9 How many degrees did the temperature **decrease** from Monday to Tuesday? _____

10 How many degrees did the temperature **increase** from Wednesday to Thursday? _____

11 Shade the thermometers. Fill in any missing numbers.

10°F	10°F	10°F
0°F	0°F	0°F
¯10°F	¯10°F	¯10°F

8°F
cooler

_____ °F
warmer

2°F ⟶ _____ °F ⟶ 4°F

---
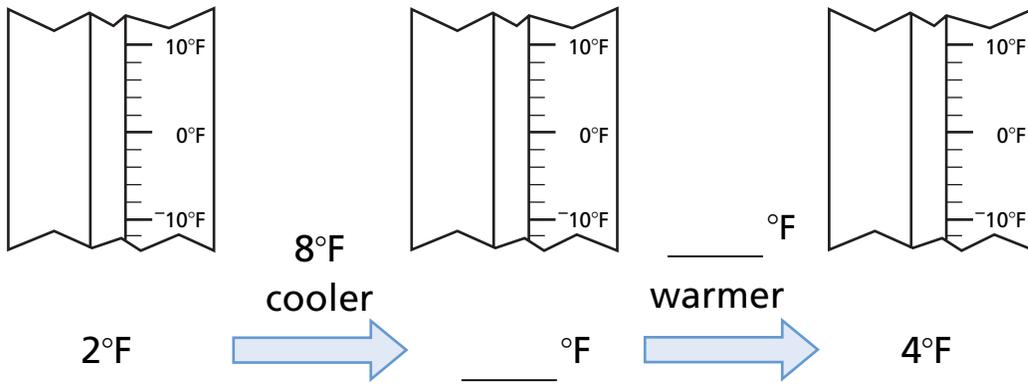
12 The coldest temperature ever
recorded in Alaska was ¯80 F. The hottest
temperature for Alaska was 180 F more, or _____ F.

---

13 The hottest temperature ever recorded
in California was 134 F. The coldest
temperature for California was 179 F less, or _____ F.

---

14 Challenge Jake knows that water freezes at **32 F,**
but he can never remember the temperature at
which water boils. One day, he figured out that if
he **multiplied the freezing temperature by 6 and
added 20,** he would get the boiling temperature.
Use Jake's trick to find the boiling point of water.

_____

_____

_____

Name _____ Date/Time _____

Problem Solving Strategy
Act It Out
NCTM Standards 1, 4, 6, 7, 8, 9, 10

Understand
Plan
Solve
Check
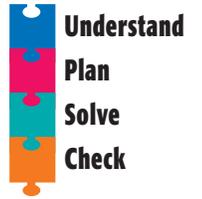
It takes Lexie 45 minutes to make one bracelet.

1 If she starts working at **10:30,** and does not stop to take a break, what time will it be when Lexie finishes her third bracelet?

_____

2 If she works non-stop for a total of $4\frac{1}{2}$ **hours,** how many bracelets could Lexie make? Explain.

_____

_____

3 There are **42 gallons** in a **barrel** of oil. About how many barrels does it take to make **1,000 gallons?** Explain.

_____

_____

_____

_____

4 Nikki feeds her small dog 4 ounces of food each day. If this rate continues, how many days would it take her dog to eat 2 pounds of food? Explain.

_____

_____

_____

Problem Solving Test Prep

Choose the correct answer.

**1** What will the temperature be if it rises 8 degrees from what is shown on the thermometer?
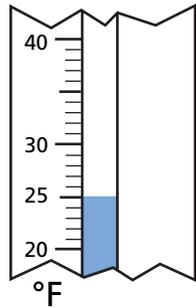
A. 33 F   **C.** 36 F

B. 34 F   **D.** 38 F

2 What part is **NOT** shaded?
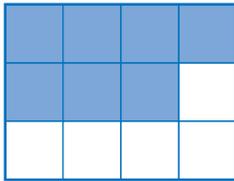
A. $\frac{5}{12}$ **C.** $\frac{5}{7}$

B. $\frac{7}{12}$ **D.** $\frac{7}{5}$

3 How would you move the white triangle to cover the shaded triangle?
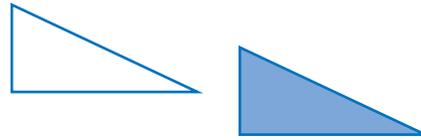
A. flip

B. turn

C. slide

D. flip and slide

4 Which rule describes this set of input-output cards?

INPUT	4, 8	3, 7	1, 4	2, 10
OUTPUT	11	9	4	11

A. Add the input numbers.

B. Add the input numbers, and then subtract 1.

C. Multiply the input numbers.

D. Add the input numbers, and then add 1 more.

✏️ Show What You Know

Solve the problem. Explain your answer.

5 Sara is meeting her friend at 2:15 P.M. The bus ride takes 45 minutes. Sara likes to leave for the bus stop 20 minutes before she catches the bus. At what time should she leave for the bus stop?

_____

_____

_____

_____

Chapter **13** Review/Assessment

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

Shade the thermometer or write the temperature. Lesson 1

❶ Monday

0°F

−10°F

[ ] °F

❷ Tuesday

10°F

0°F

[6] °F

❸ Wednesday

10°F

0°F
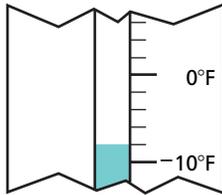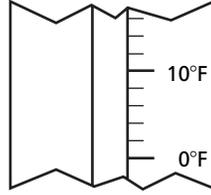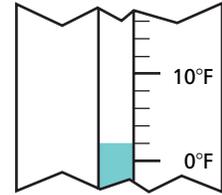
[ ] °F

## Use the thermometers above to answer the questions. Lesson 8

❹ Which day was the warmest? _____

❺ Which day was the coldest? _____

❻ How many degrees did the temperature decrease from Tuesday to Wednesday? _____

For each pair of clocks, fill in the missing times and hands. Lessons 2 and 3

❼

2 hours 30 minutes earlier

[:] → 10:45

❽

1 hour 45 minutes later

[:] → [:]
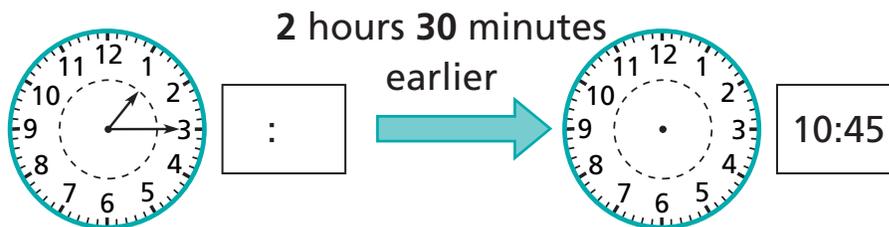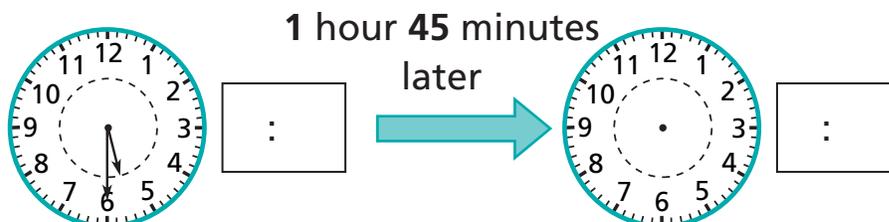
9 Complete the table.

WEIGHT OF 1 DOZEN EGGS		
Bird	**Ounces**	**Pounds and Ounces**
Quail	4 oz	_____ lb, _____ oz
Chicken	_____ oz	1 lb, 5 oz
Turkey	29 oz	_____ lb, _____ oz
Goose	_____ oz	3 lb, 12 oz

Shana had 50 fl oz of lemonade.

10 She could fill _____ one-cup measure(s) and have _____ **fl oz** left over.

11 She could fill _____ pint glass(es) and have _____ **fl oz** left over.

12 She could fill _____ one-quart pitcher(s) and have _____ **fl oz** left over.

13 How much more lemonade would Shana need to have a half gallon? _____

14 Latoya left school at 3:30 P.M. She walked 4 blocks to the library in 8 minutes. She spent 30 minutes in the library. Then she walked 6 blocks to her house. At what time did Latoya get to her house? Explain.

_____

_____

_____