

1

Purposeful Design

MATHEMATICS

THIRD EDITION

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LM 4.1A Chapter 4 Parent Letter



Dear Parents,

Your child has been working on many skills in math, especially learning addition and subtraction facts. We have talked about many problem-solving strategies, including the use of manipulatives that give your child the opportunity to touch, see, and experiment to find the answer.

This chapter introduces your child to time and money. First, our class will cover the calendar.

We encourage you to include your child in calendar activities at home. Allow him or her to record scheduled appointments, to count how many days until a special event, and to look ahead for holidays in each month. Encourage your child to memorize the days of the week and months of the year.

Next, our class will learn how to tell time to the hour, half hour, and quarter hour. Have your child read the clock to you. Help him or her develop a sense of how long a minute is compared to an hour. Talk about the time you do certain activities each day, such as eating breakfast, leaving for school, and going to bed.

Your child will practice counting money with pennies, nickels, dimes, and quarters. Now that your child has basic addition and subtraction skills, he or she will practice them in a way that reinforces their importance in the real world. Help your child understand that the number of coins in a handful is probably different from the value of those coins. If you keep a jar of change at home, have your child practice counting the coins and calculating how much they are worth.

I look forward to encouraging your child's continued learning of math concepts. Thanks for what you do in everyday situations to build your child's math skills.



LM 4.1B Project: School Store Description

The following project can be used as an additional activity or informal assessment for the time and money concepts presented in Chapter 4.

- Use **LM 4.1C Project: School Store** for students to learn the procedure for operating their store.
- Print coins from **LM 2.10A Nickels**, **LM 4.8B Pennies**, and **LM 4.8C Dimes** on card stock and cut out the coins. You can also use plastic coins.
- Students will need markers, crayons, and pencils to make signs. They will need a small box for a cash box and small plastic toys or pictures of toys to “sell” in the store. For price tags, they will need small, self-adhesive notes. They will need a table to display their items for sale and a place to put a display clock to indicate the store hours.
- Once you have determined a day for the store, assign each group a “time” for their store to be open for business. This time does not need to be the actual time of day; rather it can be a random time of day in order for students to practice telling time. For example, inform a group of students that their group store is open at 11:30. Have a student in the group set the display clock to that time. Inform groups of customers that they can go to the store when the display clock reads 11:30.
- Students will alternate working in their store as cashiers with being customers in the other groups’ stores.
- Students will work in groups of three. Have the group work together in order to complete the following jobs for their store:
 1. Color and cut out the coins.
 2. Sort the coins by value and place them in the cash box.
 3. Price the toys or pictures of toys using amounts less than 50¢. Form the numerals correctly and write the cent sign next to the price.
 4. Set up your toy display and set the display clock for the correct time.
- Plan to allow several days for students to set up their store. Then choose a day, or several days, when students can sell and shop.
- Have students complete the project and then use the scoring rubric as a checklist for self-assessment.
- Use the teacher portion of the rubric to assess student work, and then send it home.



Name _____

LM 4.1C Project: School Store

Work with teammates to set up and run a school store. Do the following:

- Color and cut out the paper coins and sort them by their value. If using plastic coins, sort them according to their value. Put the coins in your cash box.
- Cut out pictures of toys and price them. If using real toys, put price tags on them. Write the numerals correctly and add a cent sign.
- Set up your store's toy display so that your customers can see the prices. Set the display clock to the time your teacher tells you that your store is open for business.

Use the following as a checklist for your project. When you have checked all the boxes in the first column, you are finished!

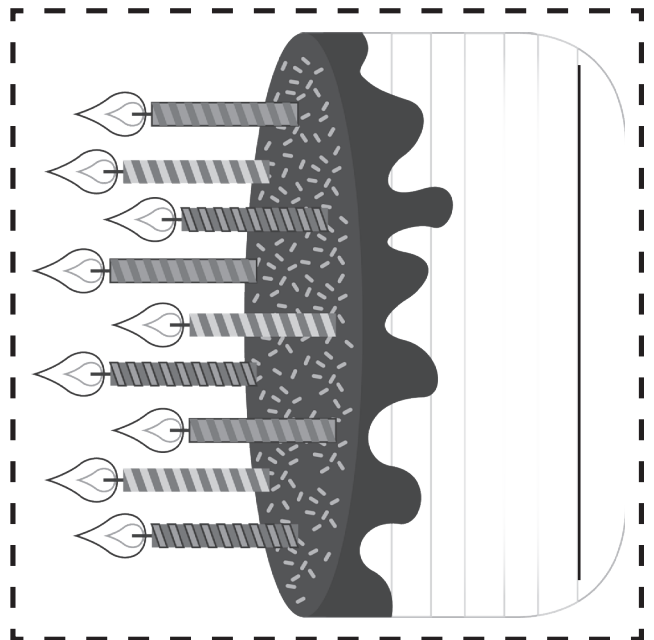
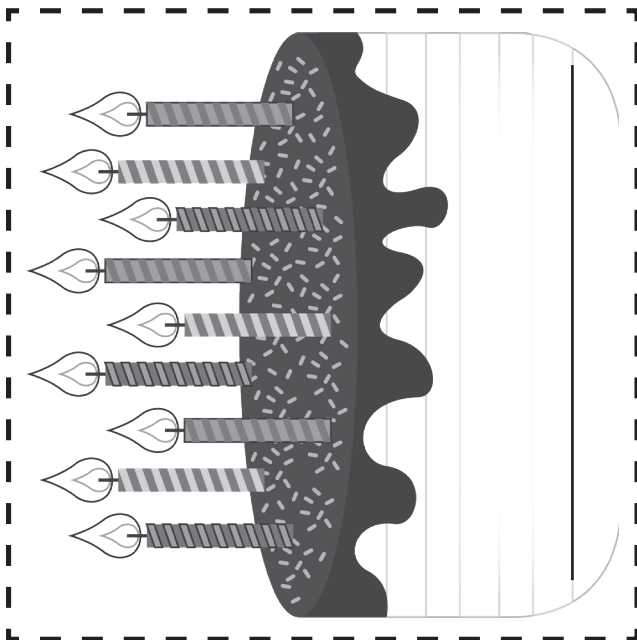
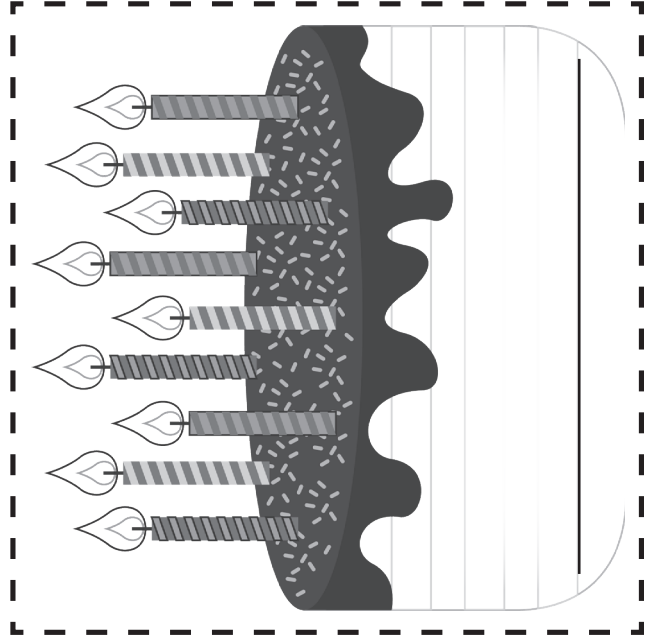
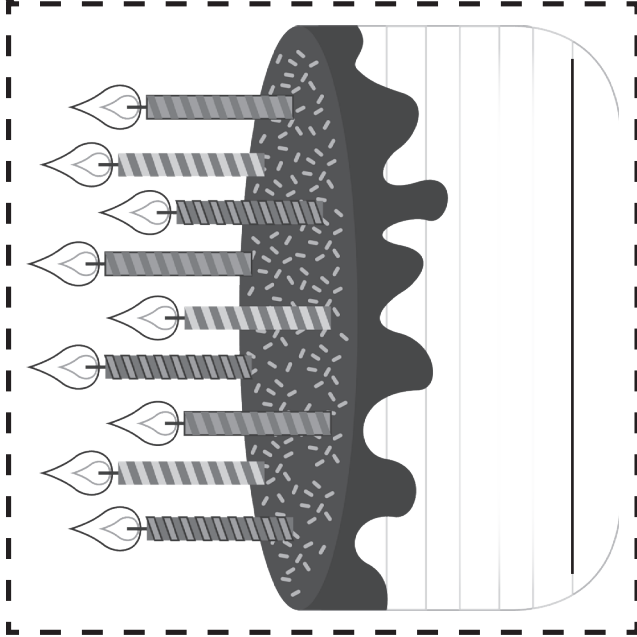
student		teacher
☐	I worked with other group members to color and cut out the paper coins, sort the coins by value, and put the coins in the cash box.	☐
☐	I worked with other group members to write the price of the toys, sell the toys, and count the money from the customers.	☐
☐	I visited another group's store and purchased at least one item. I counted the correct amount needed to buy the item.	☐
☐	I set the display clock and read the time.	☐
	Total	☐

Scoring Guide: 4 Excellent 3 Well done 2 Good 1 Needs work

Teacher Comments:



LM 4.1D Birthday Cakes





Name _____

LM 4.1E Calendar

Month _____							
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	

Name _____

LM 4.1F **Calendar Reading**

Fill in the missing dates. Complete the exercises.

JUNE						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
	4	5			8	
	11		13	14		16
17		19	20		22	
	25					30

1. The 4th of June is on a _____.

2. The date of the third Wednesday is _____.

3. The date of the second Sunday is _____.

4. What day of the week is the last day in June?
_____.



LM 4.1F Calendar Reading

Fill in the missing dates. Complete the exercises.

JUNE						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

1. The 4th of June is on a

Monday

2. The date of the third Wednesday is

June 20

3. The date of the second Sunday is

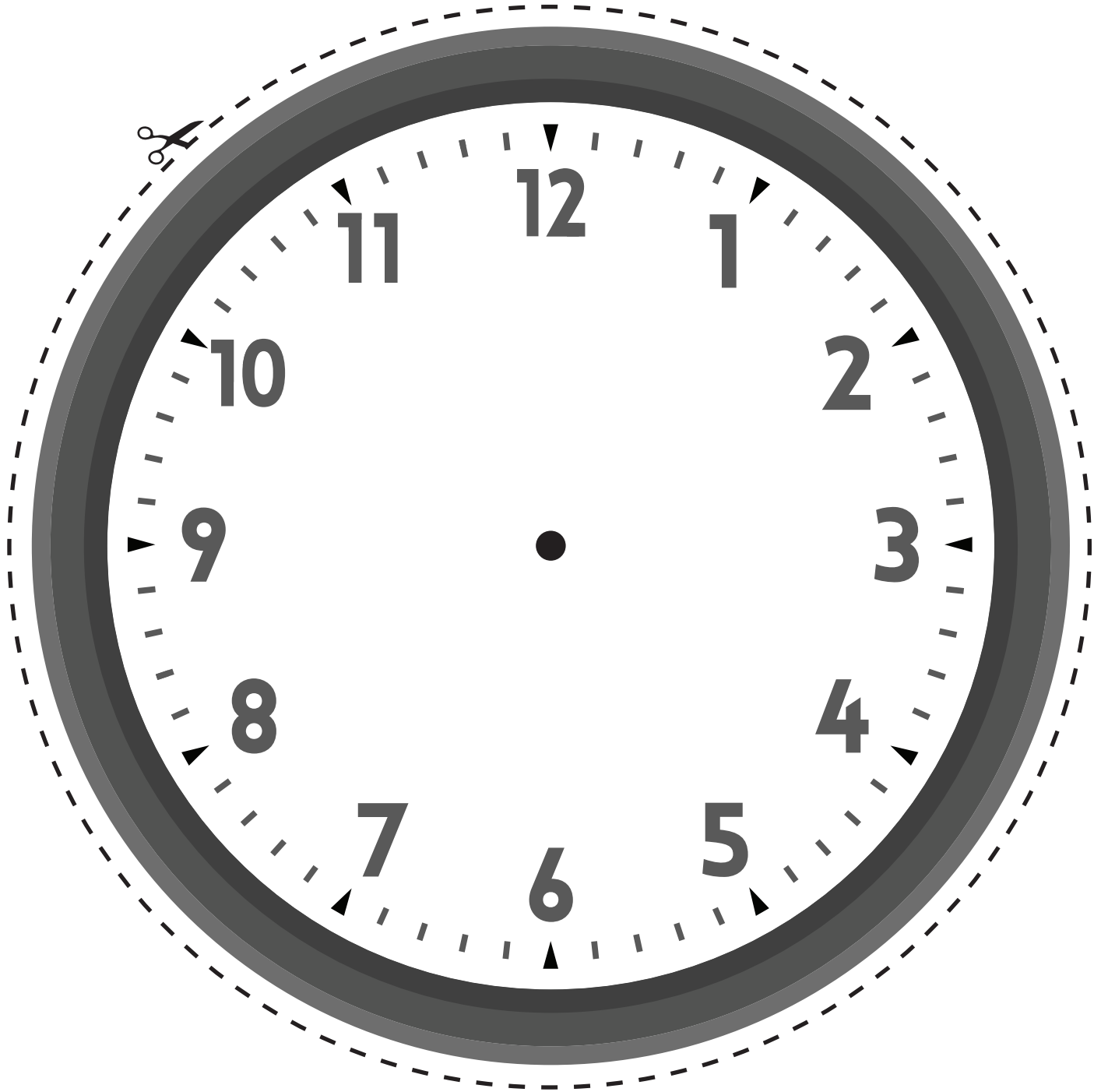
June 10

4. What day of the week is the last day in June?

Saturday



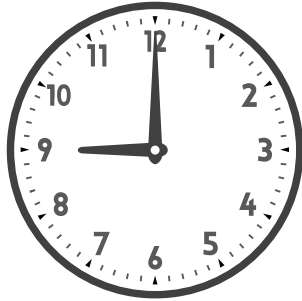
LM 4.2A Clock



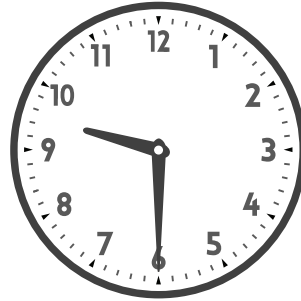
Name _____

LM 4.3A Time to the Hour and the Half Hour

9:00

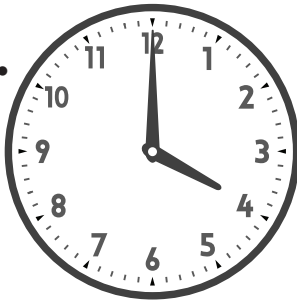


9:30

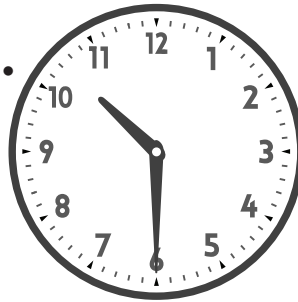


Write the time.

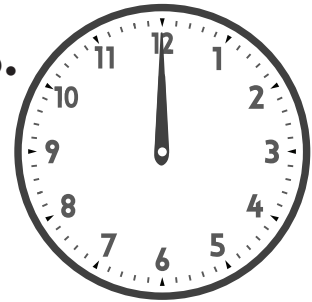
1.



3.



5.



_____ : _____

_____ : _____

_____ : _____

2.



4.



6.



_____ : _____

_____ : _____

_____ : _____

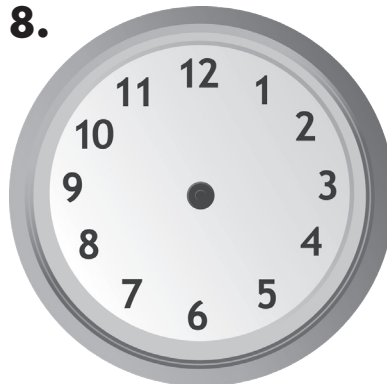
Draw the hands to show the time.

7.



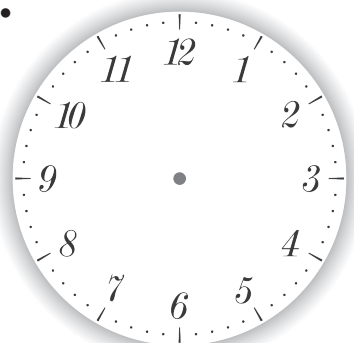
3:00

8.



8:30

9.

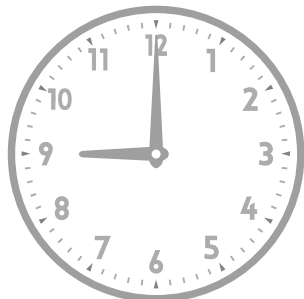


6:00

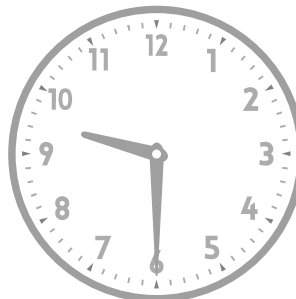


LM 4.3A Time to the Hour and the Half Hour

9:00

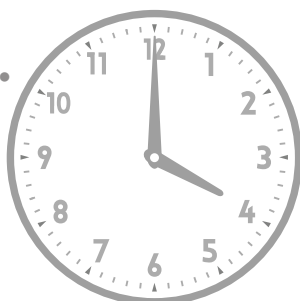


9:30



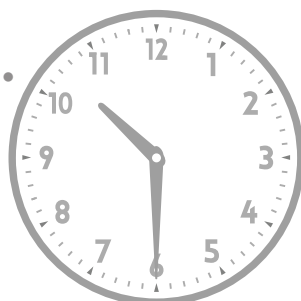
Write the time.

1.



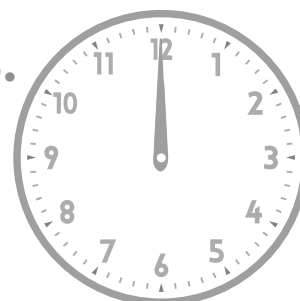
4 : 00

3.



10 : 30

5.



12 : 00

2.



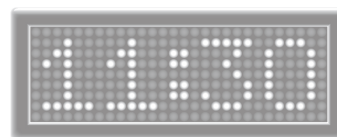
2 : 30

4.



7 : 00

6.



11 : 30

Draw the hands to show the time.

7.



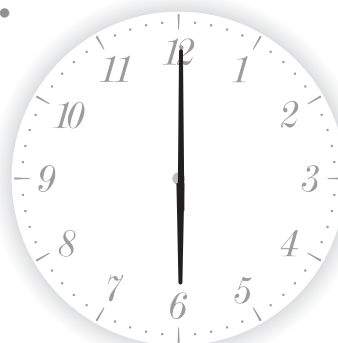
3:00

8.



8:30

9.



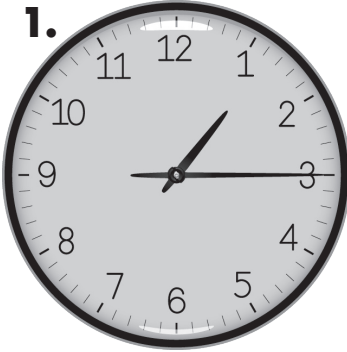
6:00

Name _____

LM 4.4A Time to the Quarter Hour

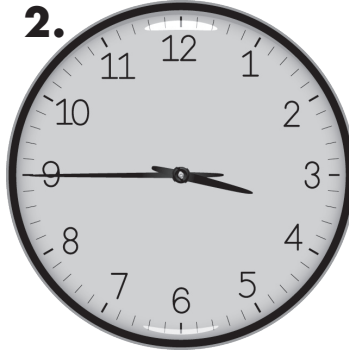
Write the time.

1.



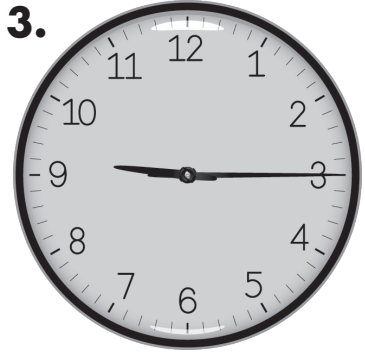
_____ : _____

2.



_____ : _____

3.



_____ : _____

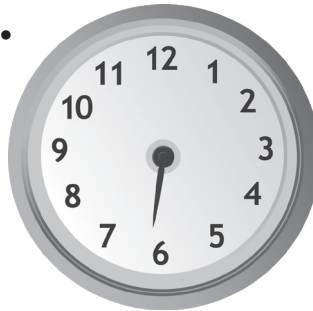
Draw the minute hand.

4.



10:45

6.



6:15

8.



4:45

5.



2:00

7.



8:15

9.



1:30

10. Write these times in order starting with 3:00.

4:30
3:00
4:45
6:30
5:15

:	:	:	:	:
:	:	:	:	:



LM 4.4A Time to the Quarter Hour

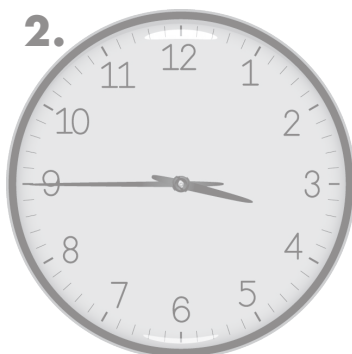
Write the time.

1.



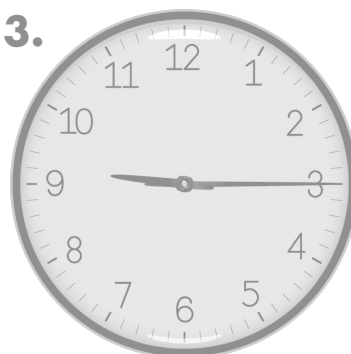
1 : 15

2.



3 : 45

3.



9 : 15

Draw the minute hand.

4.



10:45

6.



6:15

8.



4:45

5.



2:00

7.



8:15

9.



1:30

10. Write these times in order starting with 3:00.

4:30
3:00
4:45
6:30
5:15

3 : 00

4 : 30

4 : 45

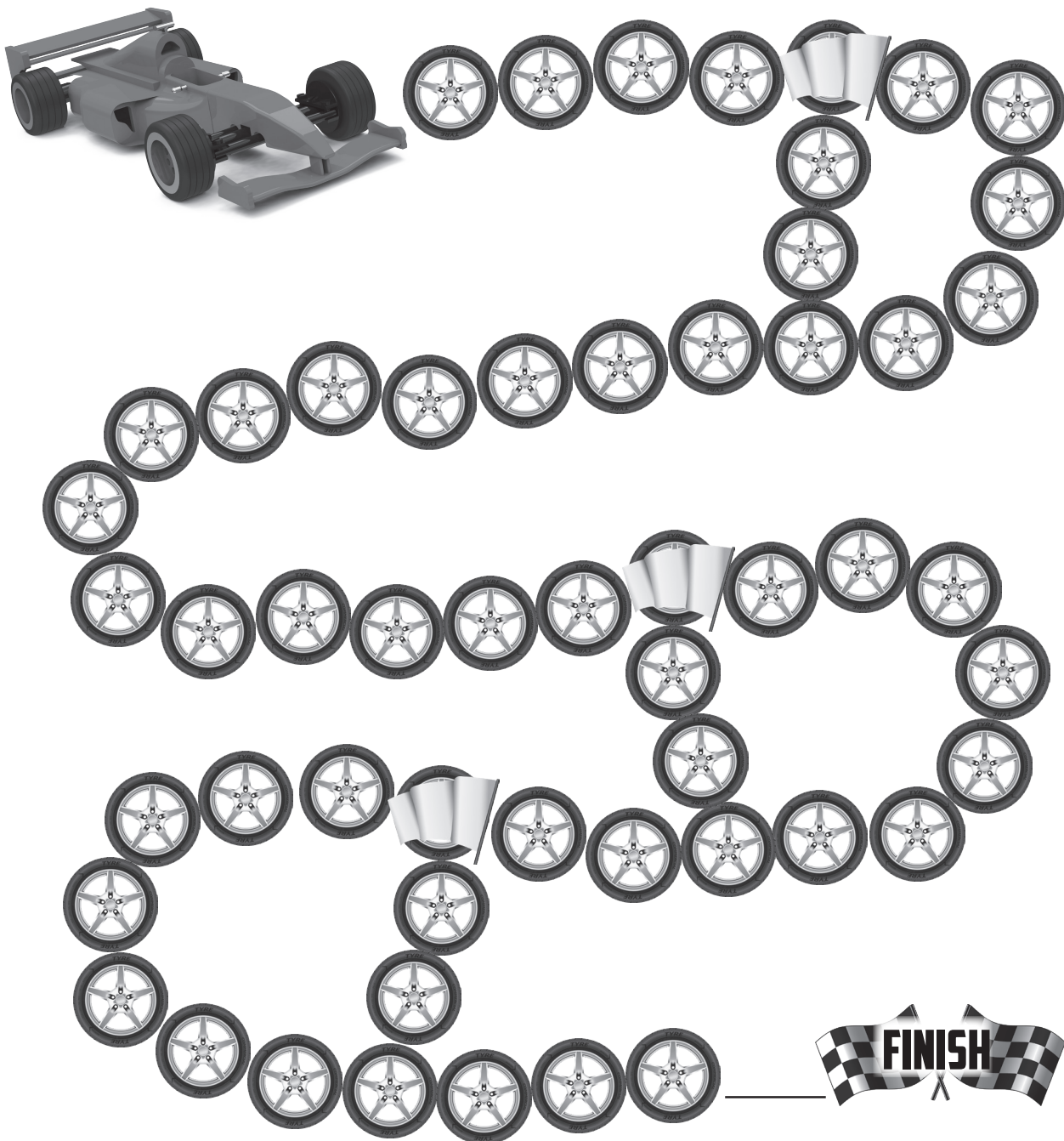
5 : 15

6 : 30



LM 4.6A Game Board: Race to the Finish Line

1. Pick a time card. Make the time on your clock.
2. If your time is correct, roll the number cube.
3. Move your marker the number of spaces shown on the cube.
4. If you land on the flag that leads to a shortcut, you may take the shorter path on your next turn.
5. When one person crosses the finish line, the game is over.



LM 4.6B Time Clocks



1:15

2:45

3:30

4:00

5:15

5:45

6:30

8:00

12:15

8:45

7:30

9:00

9:30

10:15

10:45

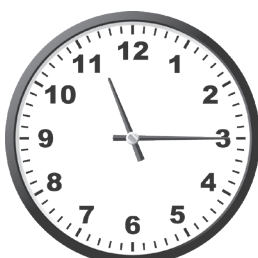
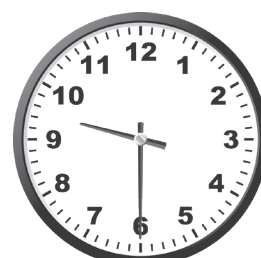
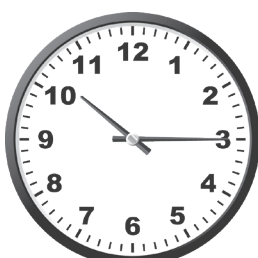
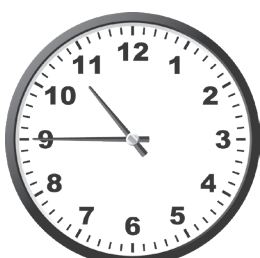
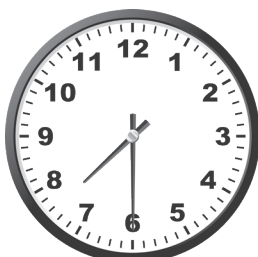
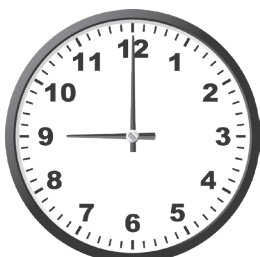
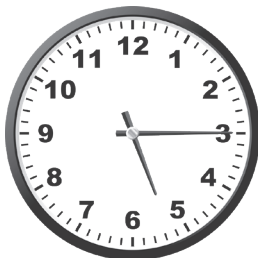
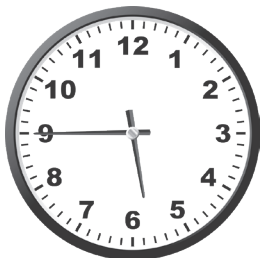
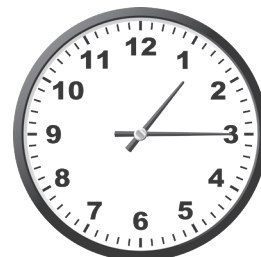
11:00

11:15

12:30



LM 4.6B Time Clocks



Name _____

LM 4.8A Coin Counting

Write the amount as you count.

1.



1 ¢

2 ¢

3 ¢

_____ ¢

_____ ¢

_____ ¢

2.



_____ ¢

_____ ¢

_____ ¢

_____ ¢

_____ ¢

3.



_____ ¢

_____ ¢

_____ ¢

_____ ¢

_____ ¢

4.



_____ ¢

_____ ¢

_____ ¢

_____ ¢

_____ ¢

5.



_____ ¢

_____ ¢

_____ ¢

_____ ¢

_____ ¢



LM 4.8A Coin Counting

Write the amount as you count.

1.



1 ¢

2 ¢

3 ¢

4 ¢

5 ¢

6 ¢

2.



5 ¢

10 ¢

15 ¢

16 ¢

17 ¢

3.



10 ¢

20 ¢

30 ¢

31 ¢

32 ¢

4.



5 ¢

10 ¢

11 ¢

12 ¢

13 ¢

5.



5 ¢

10 ¢

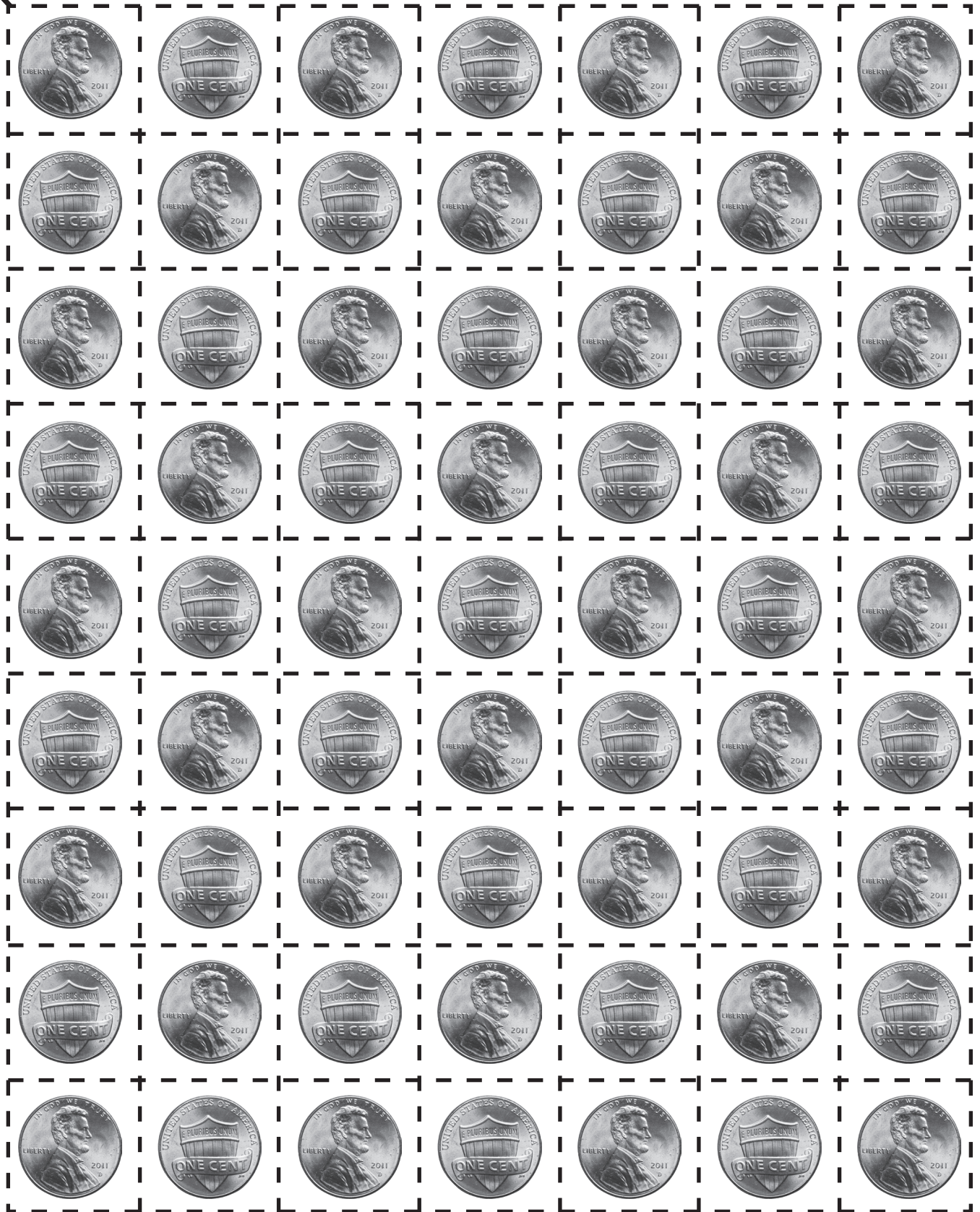
15 ¢

20 ¢

21 ¢

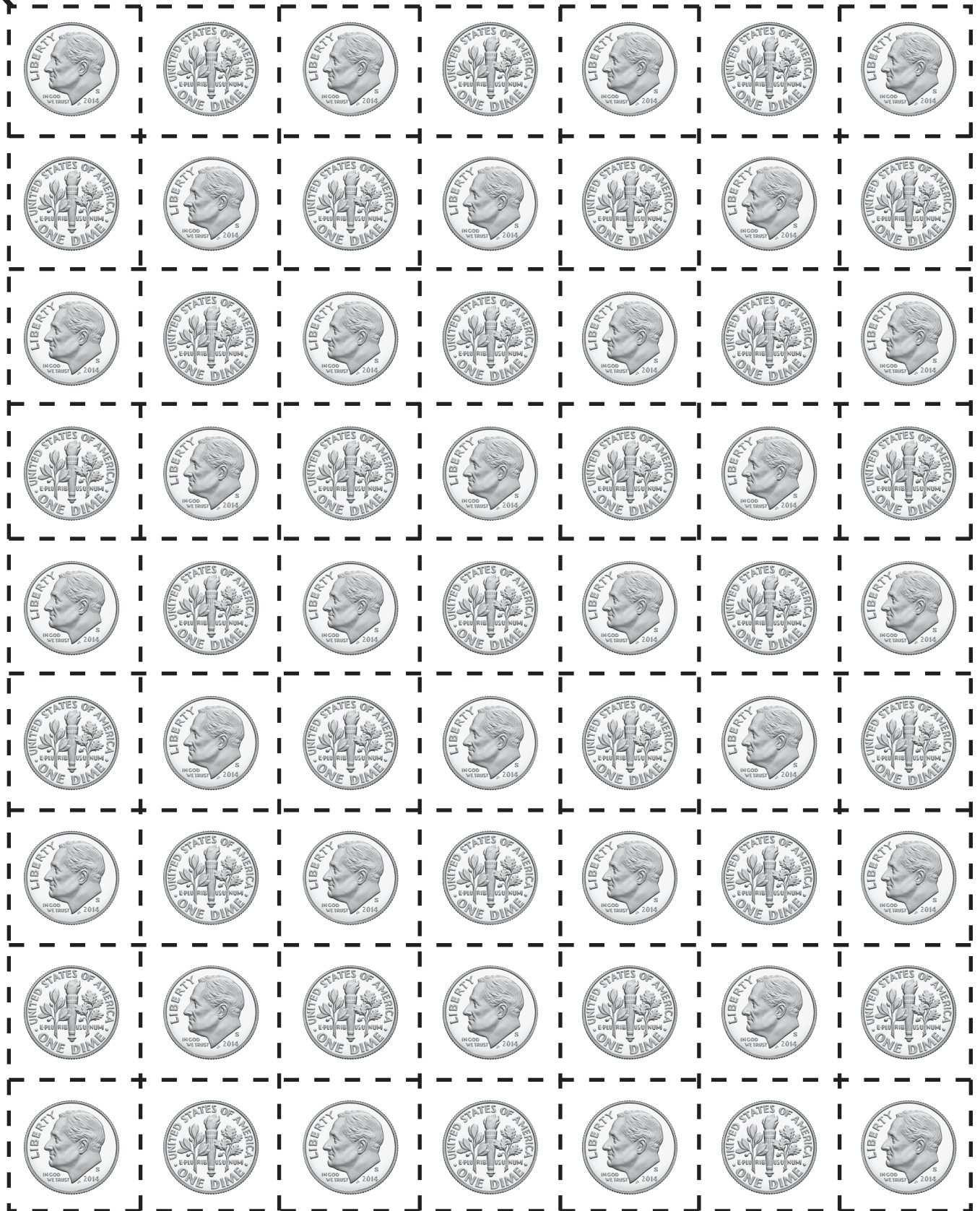


LM 4.8B Pennies





LM 4.8C Dimes



Name _____

LM 4.9A Counting Coins

Write the amount as you count.

1.



_____ ¢ _____ ¢ _____ ¢ _____ ¢

2.



_____ ¢ _____ ¢ _____ ¢ _____ ¢ _____ ¢ _____ ¢

3.



_____ ¢ _____ ¢ _____ ¢ _____ ¢ _____ ¢ _____ ¢

4.



_____ ¢ _____ ¢ _____ ¢ _____ ¢ _____ ¢

5.



_____ ¢ _____ ¢ _____ ¢ _____ ¢ _____ ¢ _____ ¢



LM 4.9A Counting Coins

Write the amount as you count.

1.



10 ¢

20 ¢

30 ¢

35 ¢

2.



10 ¢

20 ¢

25 ¢

30 ¢

31 ¢

32 ¢

3.



10 ¢

15 ¢

20 ¢

25 ¢

26 ¢

27 ¢

4.



10 ¢

20 ¢

30 ¢

35 ¢

36 ¢

5.



10 ¢

15 ¢

20 ¢

21 ¢

22 ¢

23 ¢

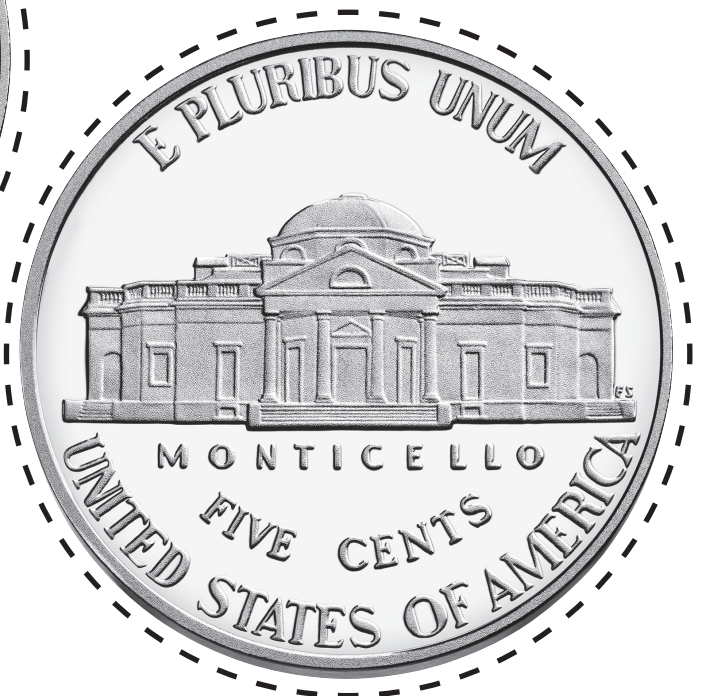
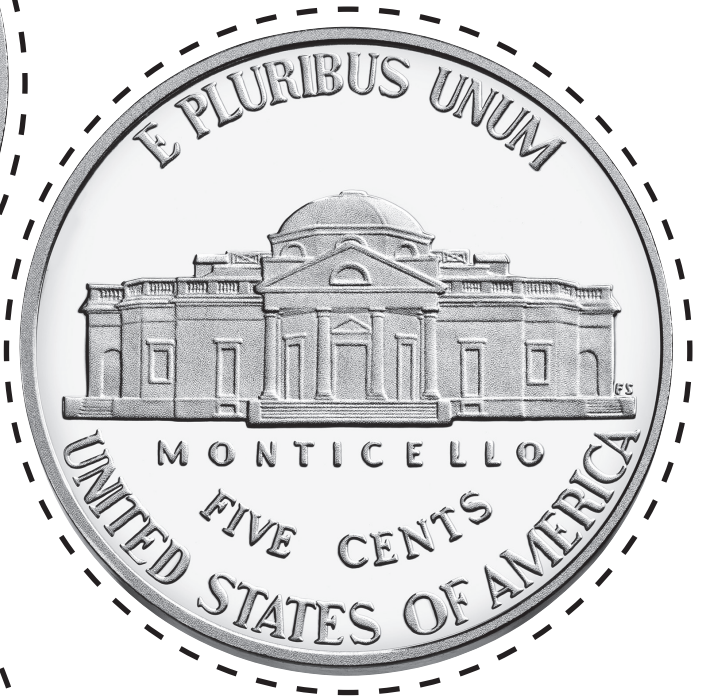


LM 4.9B Display Coins





LM 4.9C Display Coins





LM 4.9D Display Coins





LM 4.9E Display Coins



Name _____

LM 4.10A Comparing Sets of Money

Write the amount for each set of coins. Circle the set with the greater value.

1.



_____ ¢



_____ ¢

2.



_____ ¢



_____ ¢

3.



_____ ¢



_____ ¢

4.



_____ ¢



_____ ¢

5.



_____ ¢



_____ ¢



LM 4.10A Comparing Sets of Money

Write the amount for each set of coins. Circle the set with the greater value.

1.



12

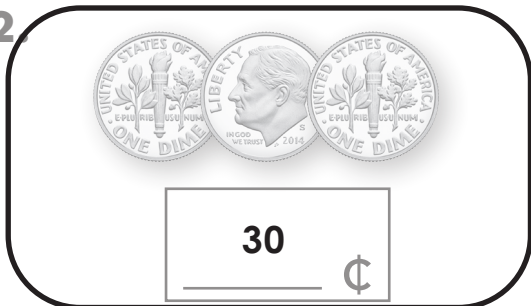
¢



13

¢

2.



30

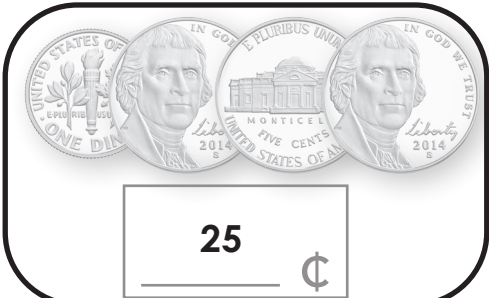
¢



25

¢

3.



25

¢



22

¢

4.



8

¢



7

¢

5.



25

¢



20

¢



LM 4.10B Game Board: Five-in-a-Row

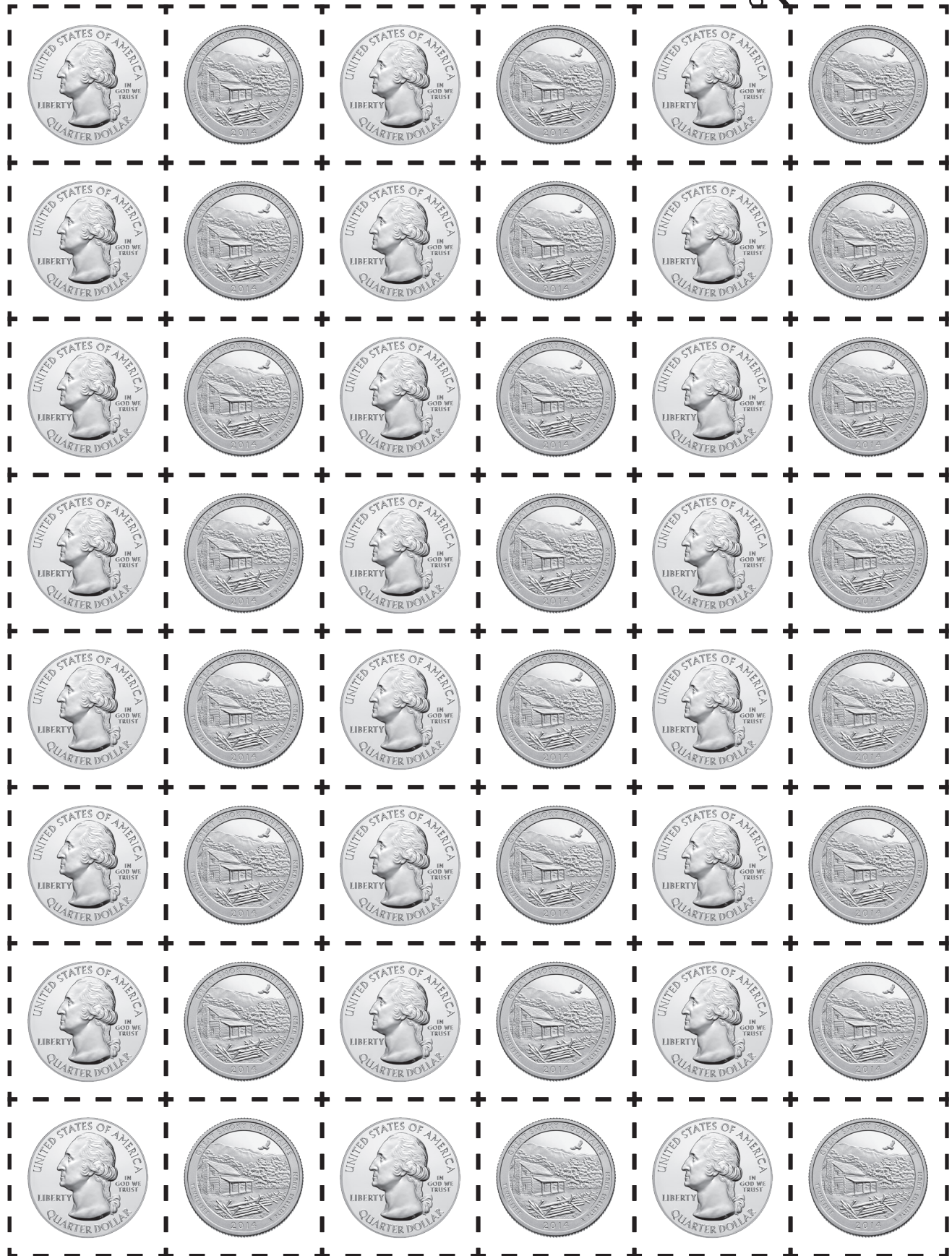


16¢	20¢	14¢	22¢	18¢
12¢	30¢	19¢	23¢	27¢
40¢	8¢	26¢	32¢	11¢
29¢	15¢	41¢	21¢	24¢
31¢	39¢	6¢	17¢	36¢





LM 4.11A Quarters



Name _____

LM 4.11B Counting Money



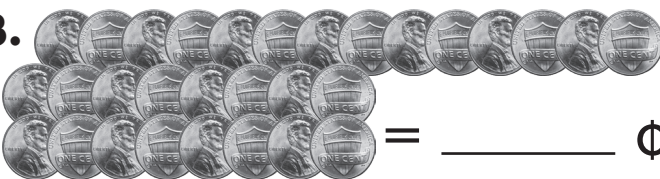
= 100 pennies

= 20 nickels

= 10 dimes



Use pennies, nickels, or dimes to make \$1.00. Write the number.

Have	Need
1.  = <u>70</u> ¢	 <u>6</u> nickels or <u>30</u> ¢
2.  = _____ ¢	_____ dimes or _____ ¢
3.  = _____ ¢	_____ pennies or _____ ¢
4.  = _____ ¢	_____ dimes or _____ ¢
5.  = _____ ¢	_____ nickels or _____ ¢

6. If you had 40 pennies, you would need 60 more pennies to make \$1.00. If you had 35 pennies, how many more pennies would you need to make \$1.00?

_____ pennies



LM 4.11B Counting Money



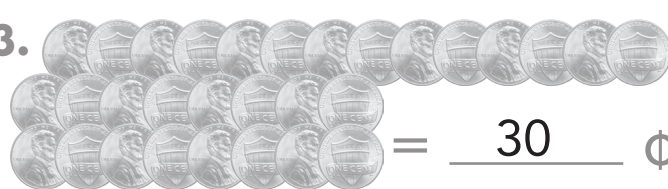
= 100 pennies

= 20 nickels

= 10 dimes



Use pennies, nickels, or dimes to make \$1.00. Write the number.

Have	Need
1.  = <u>70</u> ¢	 <u>6</u> nickels or <u>30</u> ¢
2.  = <u>40</u> ¢	<u>6</u> dimes or <u>60</u> ¢
3.  = <u>30</u> ¢	<u>70</u> pennies or <u>70</u> ¢
4.  = <u>80</u> ¢	<u>2</u> dimes or <u>20</u> ¢
5.  = <u>50</u> ¢	<u>10</u> nickels or <u>50</u> ¢

6. If you had 40 pennies, you would need 60 more pennies to make \$1.00. If you had 35 pennies, how many more pennies would you need to make \$1.00?

65 pennies



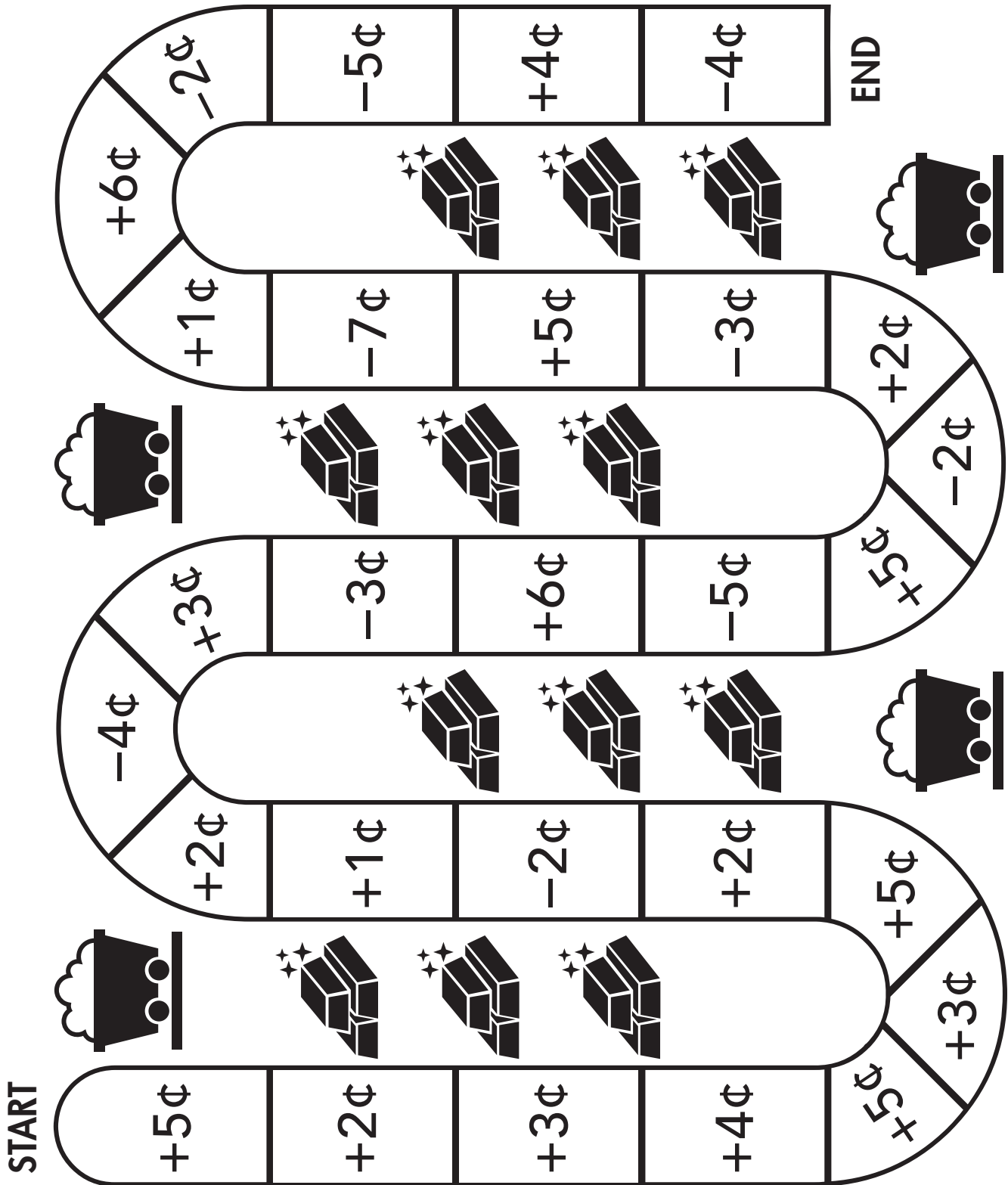
LM 4.12A Game: Gold Mine

How to play Gold Mine:

1. Set the coins where each player can reach them.
2. Roll a number cube to see who will start first. The player who rolls the higher number begins.
3. The first player rolls the number cube and moves his or her marker to the indicated space. If the space is marked with a plus sign (+), the player may take coins to match the amount shown. If the space has a minus sign (–), he or she must return that amount.
4. If a player lands on a minus amount and does not have enough money, he or she loses a turn.
5. Play goes on until one player reaches the end of the board.
The player with the most money wins.



LM 4.12B Game Board: Gold Mine





LM 4.13A Coin Concentration





LM 4.13B Coin Concentration



15¢

7¢

30¢

3¢

12¢

13¢

16¢

11¢

Name _____

LM 4.14A Coin Quiz

Count the coins. Write the amounts.



_____ ¢



_____ ¢



_____ ¢



_____ ¢



_____ ¢



_____ ¢



_____ ¢



_____ ¢



_____ ¢



_____ ¢



LM 4.14A Coin Quiz

Count the coins. Write the amounts.



12 ¢



30 ¢



25 ¢



8 ¢



20 ¢



13 ¢



25 ¢



22 ¢



7 ¢



20 ¢

Name _____

LM 4.14B Chapter 4 Test

Look at the calendars. Answer the questions.

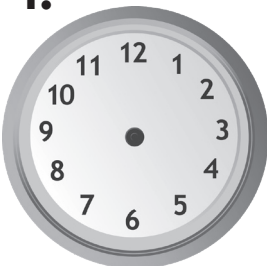
SEPTEMBER						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DECEMBER						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

- Which month has more days? _____
- Which month has 5 Mondays? _____
- Which month begins on Thursday? _____

Draw the hands to show the time.

4.



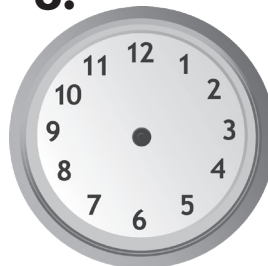
2:00

5.



5:30

6.



10:30

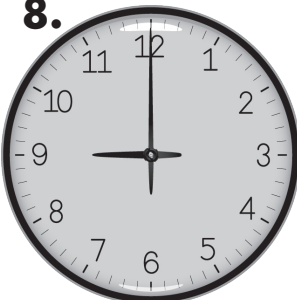
7.



1:15

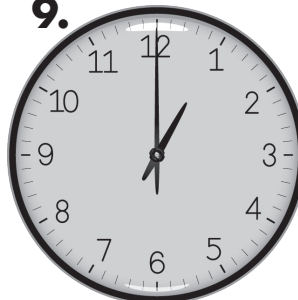
Write the time shown.

8.



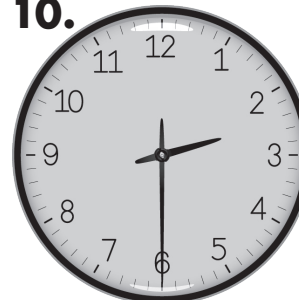
_____ : _____

9.



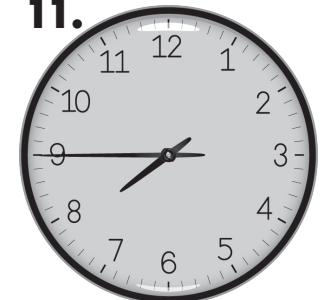
_____ : _____

10.



_____ : _____

11.



_____ : _____



LM 4.14B Chapter 4 Test

Look at the calendars. Answer the questions.

SEPTEMBER						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DECEMBER						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

- Which month has more days? December
- Which month has 5 Mondays? September
- Which month begins on Thursday? December

Draw the hands to show the time.

4.



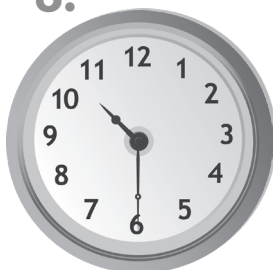
2:00

5.



5:30

6.



10:30

7.



1:15

Write the time shown.

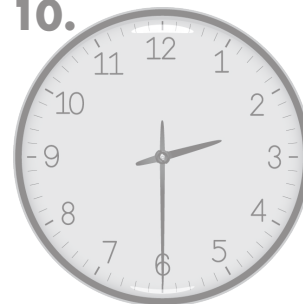
8.

9 : 00

9.

1 : 00

10.

2 : 30

11.

7 : 45

Name _____

LM 4.14C Chapter 4 Test

Count the coins.

12.   = _____ ¢

13.       = _____ ¢

14.       = _____ ¢

15.   = _____ ¢

Add or subtract.

16.
$$\begin{array}{r} 8¢ \\ + 2¢ \\ \hline \end{array}$$
 ¢

18.
$$\begin{array}{r} 7¢ \\ + 4¢ \\ \hline \end{array}$$
 ¢

20.
$$\begin{array}{r} 6¢ \\ + 5¢ \\ \hline \end{array}$$
 ¢

22.
$$\begin{array}{r} 7¢ \\ + 3¢ \\ \hline \end{array}$$
 ¢

24.
$$\begin{array}{r} 5¢ \\ + 4¢ \\ \hline \end{array}$$
 ¢

17.
$$\begin{array}{r} 10¢ \\ - 4¢ \\ \hline \end{array}$$
 ¢

19.
$$\begin{array}{r} 10¢ \\ - 5¢ \\ \hline \end{array}$$
 ¢

21.
$$\begin{array}{r} 11¢ \\ - 2¢ \\ \hline \end{array}$$
 ¢

23.
$$\begin{array}{r} 10¢ \\ - 9¢ \\ \hline \end{array}$$
 ¢

25.
$$\begin{array}{r} 8¢ \\ - 6¢ \\ \hline \end{array}$$
 ¢

26. Mark off the coins needed.





LM 4.14C Chapter 4 Test

Count the coins.

12.   = 6 ¢

13.       = 32 ¢

14.       = 18 ¢

15.   = 15 ¢

Add or subtract.

16.
$$\begin{array}{r} 8\text{¢} \\ + 2\text{¢} \\ \hline 10\text{¢} \end{array}$$

18.
$$\begin{array}{r} 7\text{¢} \\ + 4\text{¢} \\ \hline 11\text{¢} \end{array}$$

20.
$$\begin{array}{r} 6\text{¢} \\ + 5\text{¢} \\ \hline 11\text{¢} \end{array}$$

22.
$$\begin{array}{r} 7\text{¢} \\ + 3\text{¢} \\ \hline 10\text{¢} \end{array}$$

24.
$$\begin{array}{r} 5\text{¢} \\ + 4\text{¢} \\ \hline 9\text{¢} \end{array}$$

17.
$$\begin{array}{r} 10\text{¢} \\ - 4\text{¢} \\ \hline 6\text{¢} \end{array}$$

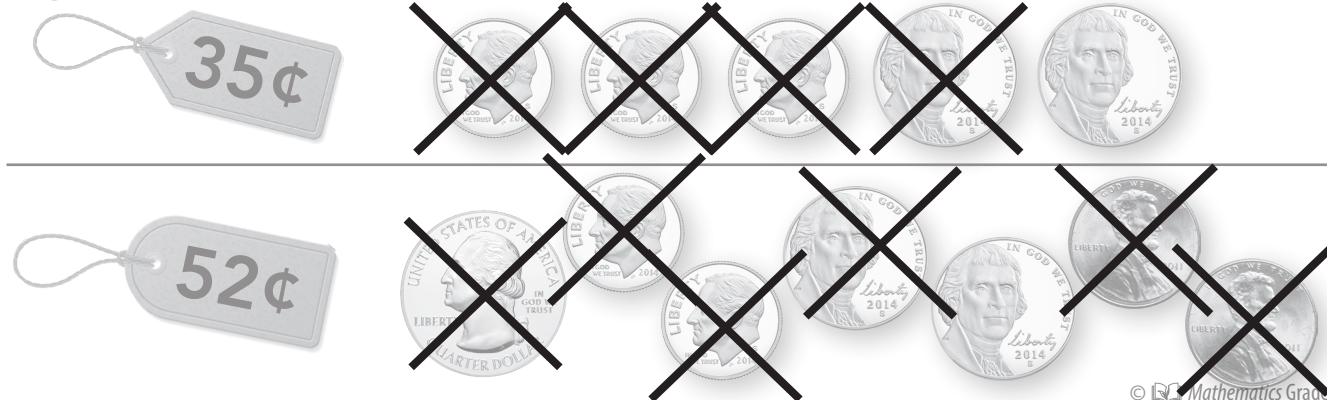
19.
$$\begin{array}{r} 10\text{¢} \\ - 5\text{¢} \\ \hline 5\text{¢} \end{array}$$

21.
$$\begin{array}{r} 11\text{¢} \\ - 2\text{¢} \\ \hline 9\text{¢} \end{array}$$

23.
$$\begin{array}{r} 10\text{¢} \\ - 9\text{¢} \\ \hline 1\text{¢} \end{array}$$

25.
$$\begin{array}{r} 8\text{¢} \\ - 6\text{¢} \\ \hline 2\text{¢} \end{array}$$

26. Mark off the coins needed.





DM 4.1A

Calendar



Month _____

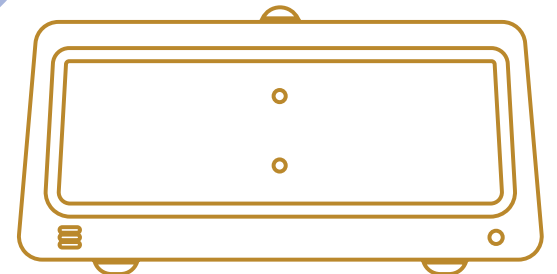
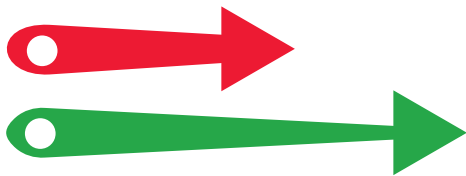
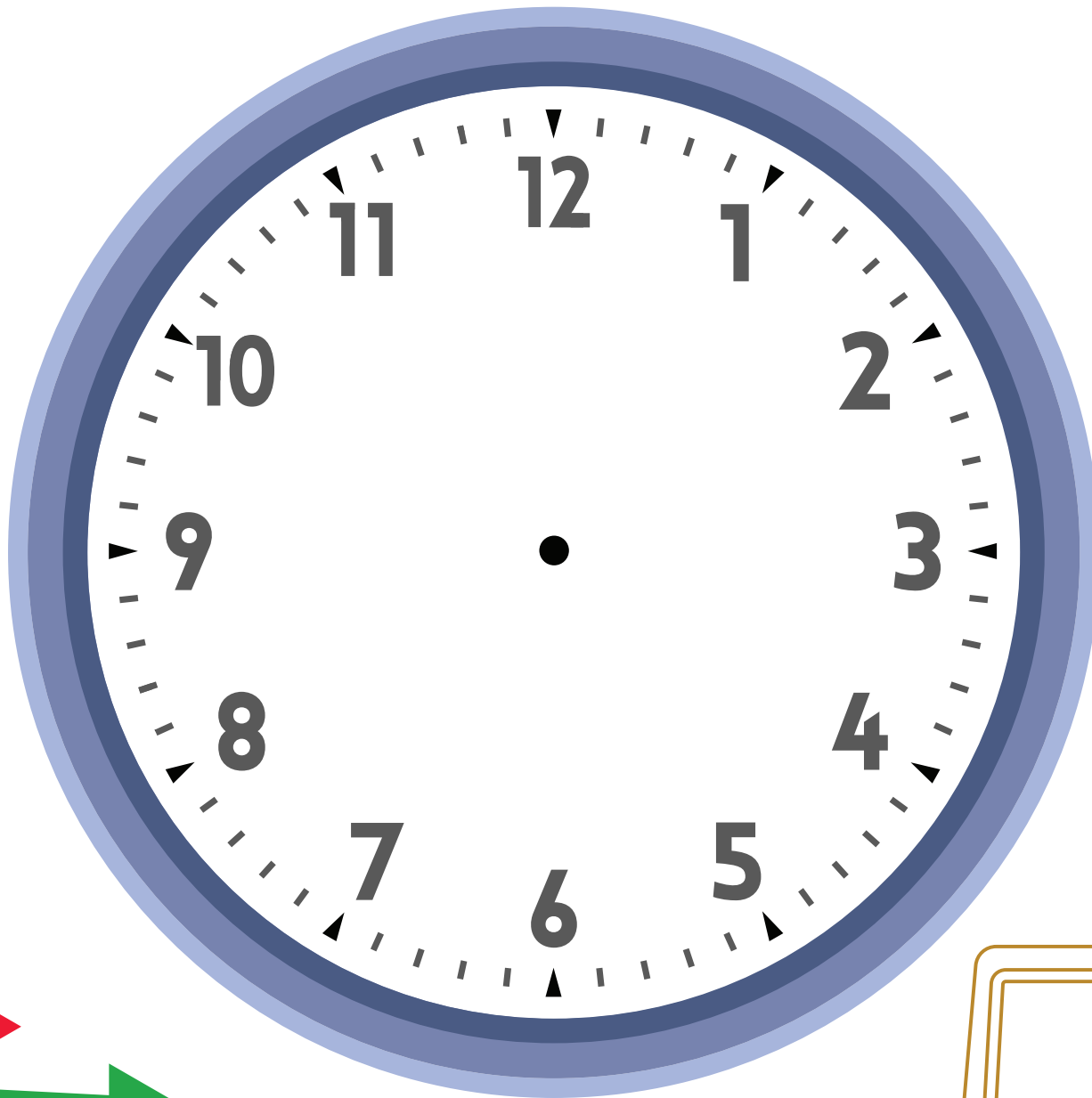


SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY



DM 4.2A

Clock





DM 4.12A

Pet Shop

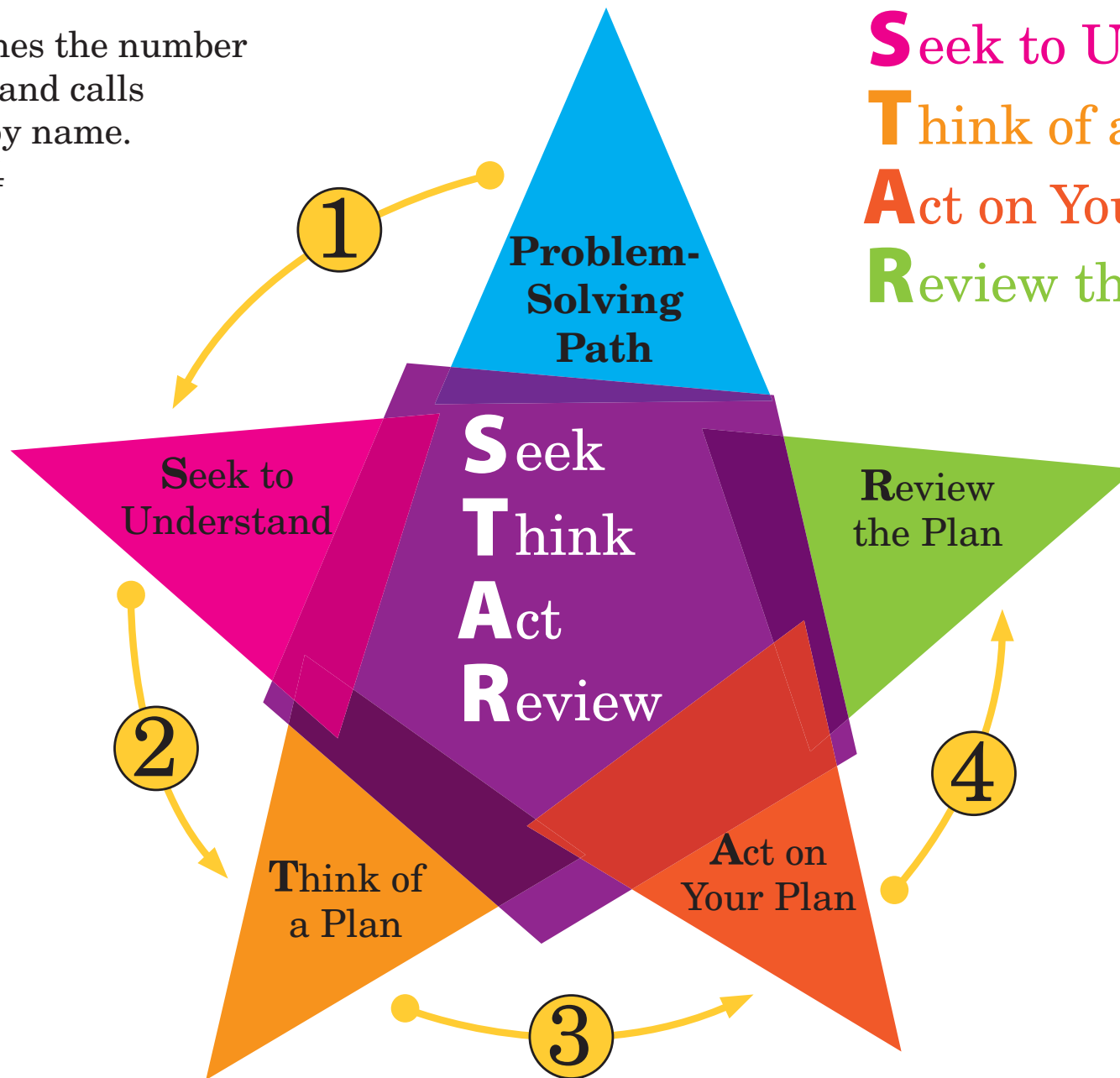




DM 4.12B

STAR Problem-Solving Path

He determines the number
of the stars and calls
them each by name.
Psalm 147:4



Seek to Understand
Think of a Plan
Act on Your Plan
Review the Plan