

Lesson 4a  
Mathematics  
Concepts

## Focus

## Mathematics Skills

- finding area
- understanding factors and remainders
- identifying line segments
- understanding probability
- understanding ratio and proportion
- rounding and estimating
- sequencing numbers or shapes
- using logic
- solving equations
- estimating measurement
- identifying parallel and perpendicular lines
- recognizing equivalent measurements
- recognizing equivalent fractions
- comparing and ordering whole numbers and decimals
- counting
- understanding a coordinate grid
- identifying the best measurement unit
- finding perimeter
- recognizing alternate forms of a number

## Test-taking Skills

- following printed directions
- referring to a graphic
- finding the answer without computing
- working methodically
- rereading a question

## Samples A and B

**Distribute** scratch paper to the students.

**Say** Turn to Lesson 4a on page 32. Read the directions at the top of the page to yourself while I read them out loud.

**Check** to see that the students have found the right page. Read the directions out loud.

**Say** In this lesson you will answer mathematics questions. Find Sample A at the top of the page. Read the question and the answer

Mathematics Concepts  
and Problem Solving

## Lesson 4a Mathematics Concepts

**Directions:** Read each problem. Then choose the answer you think is best. Mark the space for your answer.

**Sample A** What is the area of a rectangle with dimensions 8 meters by 4 meters?

- \* A 32 square meters
- B 36 square meters
- C 48 square meters
- D 84 square meters

**Sample B** Which number of students can share 54 sheets of writing paper with no sheets of paper left over?

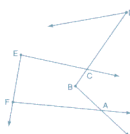
- A 4
- B 5
- C 7
- \* D 9



If an item is difficult, read the problem, look at the answer choices, then read the problem again.

1

Which represents a line segment that is drawn and labeled in the figure?



- A  $\overline{AC}$
- \* B  $\overline{EC}$
- C  $\overline{BF}$
- D  $\overline{CF}$

2

For a science experiment, Lona put a sheet divided equally into 9 parts on the lawn. What is the probability that a grasshopper will land on a number greater than 7?

1	2	3
4	5	6
7	8	9

- A  $\frac{7}{9}$
- B  $\frac{2}{7}$
- \* C  $\frac{2}{9}$
- D  $\frac{1}{7}$

GO

32 Answer rows A ☒ B ☐ C ☐ D ☐ 1 A ☒ B ☐ C ☐ D ☐ 2 A ☐ B ☒ C ☐ D ☐

choices to yourself. Which answer is correct? (pause) The first answer, 32 square meters, is correct. Mark the space for answer A in the rows at the bottom of the page. Be sure that your answer space is completely filled in with a dark mark and that you have marked the correct answer space.

**Check** to see that the students have marked the correct space.

**Say** Do Sample B by yourself. Read the question and the answer choices. Which answer is correct? (pause) Answer D, 9, is correct. Mark the space for answer D in the rows at the bottom of the page. Be sure that your answer space is completely filled in with a dark mark and that you have marked the correct answer space.

**Check** to see that the students have marked the correct space. Demonstrate how to solve the sample items.

Say Now let's look at the tip.

Read the tip aloud to the students.

Say For many of the problems in this lesson, you can find the answer without computing. If an item seems difficult, try reading the item, looking at the answer choices, and reading the item again. This will help you understand how to choose the right answer.

## Practice

Say Now you will do the Practice items in the same way we did the samples. Read each problem and the answer choices. Mark the space for the answer you think is correct in the rows at the bottom of the page. You may use the scratch paper I gave you to solve the problems. When you come to the GO sign at the bottom of a page, go on to the next page and continue working. Work until you come to the STOP sign at the bottom of page 35. Do you have any questions? You may begin.

Allow time for the students to fill in their answers. Walk around the room to be sure the students understand what they are supposed to do. Do not allow the students to move on to the next lesson.

Unit  
3

Lesson 4a Mathematics Concepts

3

When Cullen plays basketball, he usually makes 5 free throws of every 9 he tries. If he tries 27 free throws, how many should he expect to make?

- A 9
- B 14
- \* C 15
- D 23

4

The population of the United States in 1980 was 226,545,805. What is that number rounded to the nearest million?

- A 300,000,000
- B 230,000,000
- \* C 227,000,000
- D 220,000,000

5

$8107 \div 22$  is between —

- A 400 and 500
- \* B 300 and 400
- C 40 and 50
- D 30 and 40

6

In a display in the produce section of a market, fruit was lined up in this pattern: apple, pear, orange, and then the pattern was repeated several times. What was the tenth shape in the pattern?

- \* A Apple
- B Pear
- C Orange
- D It can't be determined.

7

The sum of the three numerals in Sabina's street address is the same as her age. Her age is between 11 and 16. Which of these could be in Sabina's address?

- A 974
- B 512
- \* C 453
- D 379

8

If  $n = 3$ , then  $n + 9 =$

- A 6
- \* B 12
- C 27
- D 39

GO

Answer rows 3 (A) (B) (C) (D) 5 (A) (B) (C) (D) 7 (A) (B) (C) (D)  
4 (A) (B) (C) (D) 6 (A) (B) (C) (D) 8 (A) (B) (C) (D)

33

9

The length of a dollar bill would be closest to —

- A 1 inch  
 \* B 6 inches  
 C 1 foot  
 D 6 feet

10



Carlos drew this map to show his friends where he lives. Which street is parallel to Main Street?

- A Park St.  
 B North St.  
 C Gravity St.  
 \* D Court St.

11

Which would be a possible remainder when a whole number less than 50 is divided by 6?

- \* A 5  
 B 6  
 C 7  
 D 8

12

A watering can holds 8 pints of water. How many quarts is that?

- A 2  
 \* B 4  
 C 16  
 D 32

13

Which fraction is equivalent to  $\frac{12}{36}$ ?

- A  $\frac{1}{2}$   
 B  $\frac{36}{12}$   
 C  $\frac{2}{3}$   
 \* D  $\frac{1}{3}$

14

Four children measured their height. Their heights in meters were 1.21, 1.12, 1.19, and 1.08. What was the height of the tallest student?

- \* A 1.21 meters  
 B 1.12 meters  
 C 1.19 meters  
 D 1.08 meters

15

Which vowel (a, e, i, o, u) occurs most frequently in the sentence below?

The basketball team studies for an hour before practice.

- A a  
 \* B e  
 C i  
 D u

GO

34 Answer rows 9 ☐ A ☐ B ☐ C ☐ D 11 ☐ A ☐ B ☐ C ☐ D 13 ☐ A ☐ B ☐ C ☐ D 15 ☐ A ☐ B ☐ C ☐ D  
 10 ☐ A ☐ B ☐ C ☐ D 12 ☐ A ☐ B ☐ C ☐ D 14 ☐ A ☐ B ☐ C ☐ D

Say It's time to stop. You have finished Lesson 4a.

**Review** the answers with the students. Ask volunteers to explain how they found the answer to each problem.

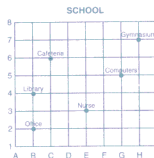
**Have** the students indicate completion of the lesson by entering their score for this activity on the progress chart at the beginning of the book. Provide the students whatever help is necessary to record their scores.

Unit  
3

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16

Use this grid of a school to answer question 16.



The principal is going to put a video studio at C4. Which will it be closest to?

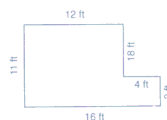
- \* A Library
- B Computers
- C Nurse
- D Cafeteria

17

Which unit would probably be used to measure the distance between two cities?

- A Liter
- B Centimeter
- \* C Kilometer
- D Milliliter

18



Deepak drew this picture of his room. What is the perimeter of the room?

- \* A 54 ft
- B 64 ft
- C 66 ft
- D 176 ft

19

7,000,700 =

- A 7000 + 7000
- \* B 7,000,000 + 700
- C 7,000,000 + 7
- D 7,000,000 + 7000

20

What number goes in the  $\square$  to make the number sentence true?

$$(43 + 79) + 65 = 43 + (\square + 65)$$

- A 108
- B 65
- C 43
- \* D 79

21

Lakata and her family are thinking about buying one of four cars: the Fairmount (\$16,893), the Comfort (\$16,904), the Catalina (\$16,599), and the Royal (\$16,620). Which is the least expensive?

- A Fairmount
- B Comfort
- \* C Catalina
- D Royal

22

Which number can be divided by 25 with none left over?

- A 95
- B 135
- \* C 150
- D 165

STOP

Answer rows 16 ● ● ● ● 18 ● ● ● ● 20 ● ● ● ● 22 A ● B ● C ●  
17 A ● B ● C ● 19 A ● B ● C ● 21 A ● B ● C ●

35