

Sample Items

Grade 4

1 Place Value**A** Solve problems involving 1 or 10 more or less

There were 85 people in line for a movie. Later 10 MORE people joined the line. How many people were waiting in line then?

- 75
- 84
- 86
- 95*

1 Place Value**B** Identify alternative forms of expressing whole numbers using expanded notation

Which means the same as 385?

- $300 + 80 + 5^*$
- $30 + 800 + 5$
- $300 + 80 + 50$
- $3 + 8 + 5$

1 Place Value**C** Identify alternative forms of expressing whole numbers using regrouping

Which means the same as 2 tens and 18 ones?

- 28
- 38*
- 218
- 2018

1 Place Value**D** Use place value concepts to interpret the meaning of numbers

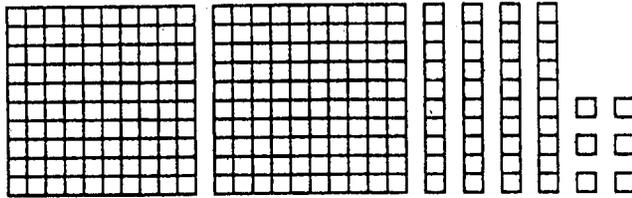
In which number does the 3 have the GREATEST value?

- 435
- 345*
- 543
- 39

2 Pictorial Representations of Numbers

A Relate pictorial representations using base ten blocks to whole numbers and vice versa

What number is shown by the blocks in this picture?



- 642
- 426
- 264
- 246*

2 Pictorial Representations of Numbers

B Identify, label or shade fractional parts of regions and sets

Shade in $\frac{1}{8}$ of the set.



4 Order, Magnitude and Rounding of Numbers

A Order whole numbers

Which list shows the numbers in order from LEAST to GREATEST?

- 53, 63, 54, 62
- 54, 53, 62, 63
- 53, 54, 62, 63*
- 53, 63, 54, 62

4 Order, Magnitude and Rounding of Numbers

B Describe the magnitude of whole numbers

Mark wants to buy a new telephone for his office. He does not want to spend more than \$55. Which phone costs MORE than he wants to spend?



4 Order, Magnitude and Rounding of Numbers

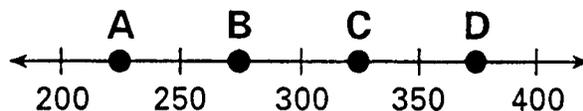
C Round whole numbers in context

Beth read 18 books last summer. This number is CLOSEST to

- 10
- 15
- 20*
- 25

4 Order, Magnitude and Rounding of Numbers

D Identify points representing whole numbers on a number line and vice versa



The number 385 would be CLOSEST to which point marked on the number line?

- A
- B
- C
- D*

5 Models for Operations**A** Relate multiplication and division facts to rectangular arrays and pictures

Which number fact goes with this picture?

☺	☺	☺
☺	☺	☺
☺	☺	☺
☺	☺	☺
☺	☺	☺

$5 + 3 =$

$5 \div 3 =$

$5 \times 3 = *$

$5 - 3 =$

5 Models for Operations**B** Identify the appropriate operation or number sentence to solve a story problem

Martha had 6 plants in her front yard and 4 plants in her backyard. Which number sentence could be used to find out how many plants Martha had all together?

$6 \times 4 = \square$

$6 - 4 = \square$

$6 + 4 = \square$

$6 \div 4 = \square$

5 Models for Operations**C** Write story problems from addition and subtraction number sentencesWrite a story problem that can be solved using the number sentence $8 + 4 = \square$ **6 Basic Facts****A** Add and subtract facts to 18

$6 + 9 =$

19

17

16

15*

6 Basic Facts**B** Multiply and divide by 2, 5 or 10

$2 \times 4 =$

- 2
- 6
- 8*
- 42

7 Computation with Whole Numbers and Decimals**A** Add and subtract 1- and 2-digit whole numbers without regrouping

$28 + 61 =$

- 47
- 49
- 87
- 89*

7 Computation with Whole Numbers and Decimals**B** Add 1- and 2-digit whole numbers with regrouping

$53 + 27 =$

- 70
- 80*
- 81
- 710

9 Solve Word Problems**A** Solve simple story problems involving addition or subtraction

There are 16 girls and 24 boys in the school chorus. How many children are in the chorus all together?

- 30
- 40*
- 50
- 60

9 Solve Simple Word Problems

B Solve simple problems involving addition or subtraction *with extraneous information*

Linda had 5 apples, 3 oranges and 6 peaches. Each piece of fruit cost 9¢.
How many pieces of fruit did Linda have?

- 5
- 14*
- 15
- 23

10 Numerical Estimation Strategies

A Identify the best expression to find an estimate

Joe needs to subtract 319 from 799. Which of the following would be BEST for Joe to use to ESTIMATE the difference?

- 700 – 300
- 700 – 400
- 800 – 300 *
- 800 – 400

10 Numerical Estimation Strategies

B Determine a reasonable estimate and describe the strategy used to determine the estimate

Kelly wants to ESTIMATE the total height of two basketball players. One player is 72 inches tall and the other is 69 inches tall.
What would be a GOOD ESTIMATE?
Explain how you made your estimate.

11 Estimating Solutions to Problems

A Estimate a reasonable answer to a problem

Kelly bought a hat for \$27 and a sweater for \$32. ABOUT how much did she spend on the 2 items all together?

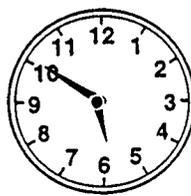
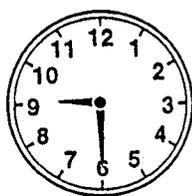
- A little less than \$60*
- A little more than \$50
- A little less than \$50
- A little more than \$60

11 Estimating Solutions to Problems**B** Use estimation to make and defend decisions

A book costs \$4.89, a bookmark costs \$1.75 and a magazine costs \$1.99. Fred has \$10. Explain how you could use ESTIMATION to decide if Fred has enough money to buy all three items.

14 Time**A** Tell time to the nearest hour, half-hour and quarter-hour using analog and digital clocks

Recess begins at 10:30. Which clock shows that time?

**14 Time****B** Solve problems involving time, elapsed time and calendars**November**

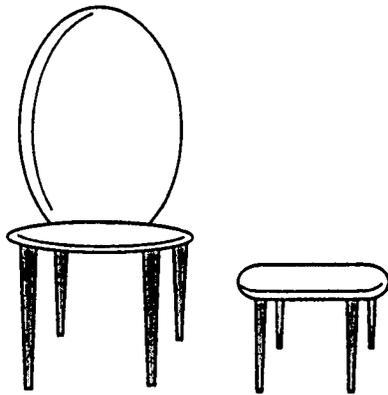
Sun	Mon	Tues	Wed	Thur	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Colette got her allowance on the third day of this month. What day was that?

- Monday
- Wednesday
- Saturday*
- Sunday

15 Approximating Measures

A Estimate lengths and areas

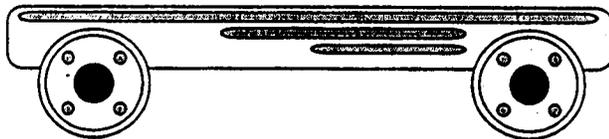


ABOUT how many footstools would be the same height as the chair?

- 2
- 3*
- 4
- 5

16 Customary and Metric Measures

A Measure or draw lengths to the nearest inch or centimeter



Use your ruler to measure the length of the wagon in this picture to the NEAREST centimeter.

- 5 centimeters
- 8 centimeters*
- 12 centimeters
- 15 centimeters

16 Customary and Metric Measures

B Identify appropriate customary or metric units of measure for a given situation

ABOUT how long is a new pencil?

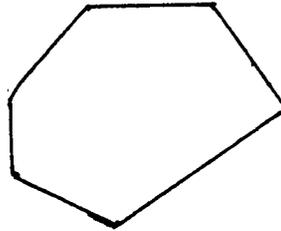
- 7 inches*
- 7 feet
- 7 yards
- 7 miles

17 Geometric Shapes and Properties

A Identify geometric shapes and figures including number of angles and sides of polygons

How many angles does this shape have?

- 4
- 5
- 6*
- 7



17 Geometric Shapes and Properties

B Draw geometric shapes and figures

Draw a shape with 4 sides.

19 Tables, Graphs and Charts

A Identify correct information from tables, graphs and charts

The table shows books that some students in Mr. Johnson's class read.

Book	Number of Students
<i>Old Yeller</i>	8
<i>Tales of a Fourth-Grade Nothing</i>	12
<i>Indian in the Cupboard</i>	5
<i>Sign of the Beaver</i>	14

How many of Mr. Johnson's students read *Old Yeller*?

- 5
- 8*
- 12
- 14

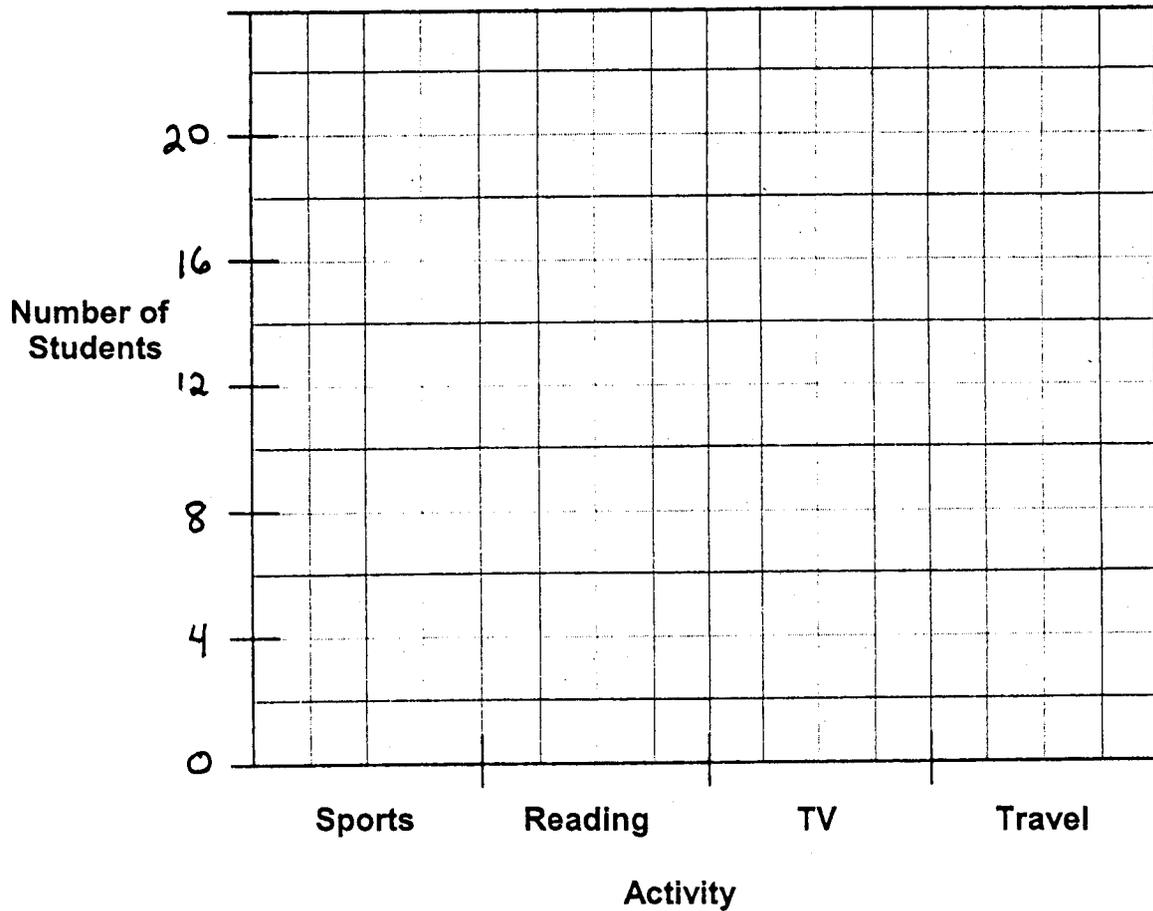
19 Tables, Graphs and Charts

B Create bar graphs and pictographs from data in tables and charts

The table shows things students did over a weekend.

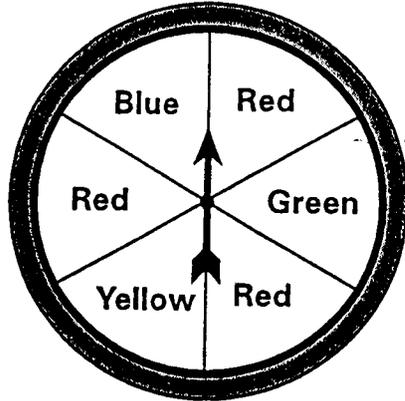
Activity	Number of Students
Sports	15
Reading	13
T.V.	5
Travel	4

Complete the BAR graph to show the same information.



21 Probability

A Solve problems involving elementary notions of probability



If Robin spins this spinner once, on which color is the arrow MOST likely to land?

- Red*
- Blue
- Green
- Yellow

22 Patterns

Extend or complete patterns involving whole numbers and attributes or identify or state rules for given patterns

These numbers follow a pattern.

5, 9, 13, 17, _____, 25

Which number is missing from the pattern?

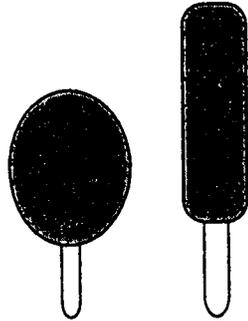
Write the number. _____

Then write a sentence that explains why you think that is the missing number.

24 Classification and Logical Reasoning

A Identify objects that are the same or different by one attribute

Marie bought these lollipops at the fair.



How are the lollipops the SAME?

- Size
- Shape
- Color*
- Color and shape

24 Classification and Logical Reasoning

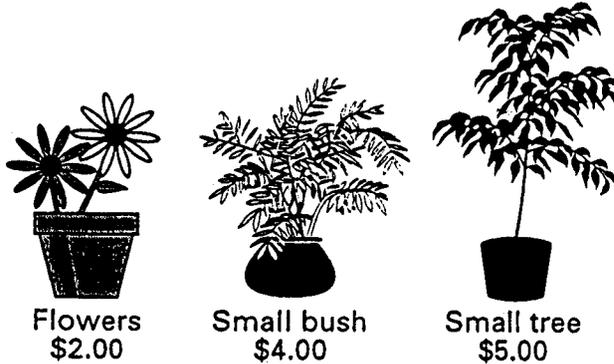
B Sort objects into 2 groups by common attribute

Sort these figures into 2 groups so that the figures in each group have something in common. Show how you grouped the figures by writing the letter from each figure onto the chart. Then explain how you decided to group the figures.



25 Mathematical Applications**A Numerical**

Aida has three kinds of plants. These are the plants she has:



She wants to make a garden with the plants. The garden can hold only 10 plants and will need all three types. The garden can cost no more than \$25.

Use the space below to show one way Aida could make her garden. Show how many of each plant she should buy and show the total cost.

Show how you got your answer.

25 Mathematical Applications**B Statistical**

Jenny is selling muffins at a stand. She sells the muffins in packs of 2 and 4. This chart shows how she planned to sell each of them:

Muffins	Cost
2-pack	\$1.50
4-pack	\$2.50

Jenny sorted the 60 muffins into the two types of packs. When she was done, she found that she had the same number of 2-packs as 4-packs. Use the space below to show the number and types of muffin packs Jenny sold at the stand.

Show how you got your answer.

Grade 6

1 Place Value**A** Solve problems involving 100 and 1000 more or less

On Monday 285 concert tickets were sold. By Tuesday 100 more tickets were sold. How many tickets were sold all together?

275

287

385*

395

1 Place Value**B** Identify alternative forms of expressing whole numbers less than 10,000 using expanded notation

Which means the same as 3815?

 $3000 + 800 + 10 + 5^*$ $3000 + 800 + 10 + 50$ $3000 + 80 + 100 + 5$ $300 + 80 + 100 + 5$ **1 Place Value****C** Identify alternative forms of expressing whole numbers less than 10,000 using regrouping

Which means the same as 7500?

75 hundreds*

75 tens

75 thousands

75 ones

1 Place Value**D** Use place value concepts to interpret the meaning of numbers

In which number does the 3 have the greatest value?

4351

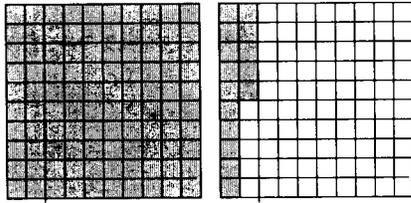
3451*

5431

391

2 Pictorial Representations of Numbers

A Relate decimals (0.01-2.99) to pictorial representations and vice versa



Each = 0.01

The shaded part of this picture shows what decimal number?

- 1.35
- 1.25
- 1.15*
- 1.05

2 Pictorial Representations of Numbers

B Relate fractions and mixed numbers to pictures and vice versa

The shaded part of this picture shows which fraction?

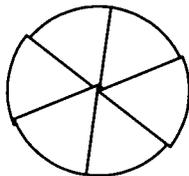


- 3/8
- 3/4
- 3/5
- 3/6*

2 Pictorial Representations of Numbers

C Construct pictorial representations of fractions, mixed numbers and decimals

Shade in 1/6 of this shape.



3 Equivalent Fractions, Decimals and Percents**A** Rename equivalent fractions

Wally eats breakfast $\frac{1}{3}$ of the mornings he goes to school. Which is another way to describe this?

Wally eats breakfast 12 out of 20 school mornings.

Wally eats breakfast 8 out of 16 school mornings.

Wally eats breakfast 6 out of 8 school mornings.

Wally eats breakfast 5 out of 15 school mornings. *

3 Equivalent Fractions, Decimals and Percents**B** Relate equivalent mixed numbers and improper fractions

Which fraction is equivalent to $2\frac{3}{5}$?

$\frac{10}{5}$

$\frac{12}{5}$

$\frac{13}{5}$ *

$\frac{23}{5}$

4 Order, Magnitude and Rounding of Numbers**A** Order whole numbers less than 100,000

Ron is studying the Great Lakes in geography class. He made this chart to show the maximum depth of each of the lakes.

Lake	Depth feet
Erie	116
Huron	850
Michigan	923
Ontario	393
Superior	1,330

Which shows the depth of the lakes arranged from GREATEST to LEAST?

Erie, Huron, Michigan, Ontario, Superior

Superior, Ontario, Michigan, Huron, Erie

Erie, Ontario, Huron, Michigan, Superior

Superior, Michigan, Huron, Ontario, Erie *

4 Order, Magnitude and Rounding of Numbers**B** Order fractions, mixed numbers and decimals

The chart shows the heights of some of Bill's friends.

Which of Bill's friends is the TALLEST?

Mac
Sam *
Ted
Johnny

Friend	Height Feet
Mac	$4\frac{1}{4}$
Sam	$4\frac{3}{4}$
Ted	$3\frac{7}{8}$
Johnny	$4\frac{1}{2}$

4 Order, Magnitude and Rounding of Numbers**C** Describe the magnitude of whole numbers less than 100,000

Amanda collected between 4600 and 5800 pounds of newspaper for recycling. Which could be the amount collected?

5120*
3960
4410
5970

4 Order, Magnitude and Rounding of Numbers**D** Describe the magnitude of fractions, mixed numbers and decimals

Karen bought between $4\frac{1}{2}$ and $7\frac{1}{2}$ pounds of meat for the barbecue. Which could be the amount bought?

$4\frac{1}{4}$ pounds
 $5\frac{1}{4}$ pounds*
 $7\frac{3}{4}$ pounds
 $3\frac{3}{4}$ pounds

4 Order, Magnitude and Rounding of Numbers**E** Round whole numbers in a context

There were 6852 people at the game. This number is ABOUT

5000
6000
7000*
8000

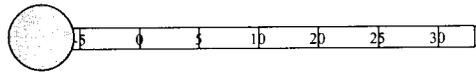
4 Order, Magnitude and Rounding of Numbers
F Round decimals in a context

Ann bought 2.1 pounds of pet food. This amount rounded to the NEAREST whole number is

- 1 pound
- 2 pounds*
- 3 pounds
- 4 pounds

4 Order, Magnitude and Rounding of Numbers
G Locate points on number lines and scales

The average July temperature in Connecticut is 21 degrees Celsius. Mark this temperature on the thermometer with a heavy line.



5 Models for Operations
A Identify the appropriate operation or number sentence to solve a story problem

During inventory of a hardware store, Jason counted 16 boxes of bolts. Each box contained 48 bolts. Which number sentence could be used to find out how many bolts were in all of the boxes?

- Add 48 and 16
- Subtract 16 from 48
- Multiply 48 by 16*
- Divide 48 by 16

5 Models for Operations
B Write story problems from multiplication and division number sentences

Write a story problem that can be solved using the number sentence
 $8 \times 4 = \square$.

6 Basic Facts
A Multiply and divide facts

Solve this problem.

$$8 \times 7 =$$

7 Computation with Whole Numbers and Decimals

A Add and subtract 2-, 3- and 4-digit whole numbers and money amounts less than \$100

Solve this problem.

$$\$69.39 - \$2.84$$

7 Computation with Whole Numbers and Decimals

B Multiply and divide multiples of 10 and 100 by 10 and 100

$$\$10.00 \times 40$$

$$\$4000.00$$

$$\$400.00^*$$

$$\$40.00$$

$$\$4.00$$

7 Computation with Whole Numbers and Decimals

C Multiply and divide 2- and 3-digit whole numbers and money amounts less than \$10 by 1-digit numbers

Solve this problem.

$$345 \times 4 =$$

8 Computation with Fractions

A Add and subtract fractions and mixed numbers with like denominators

$$1/4 + 2/4 =$$

$$3/8$$

$$3/6$$

$$3/5$$

$$3/4^*$$

9 Solve Simple Word Problems

A Solve 1-step problems involving whole numbers and money amounts

Solve this problem.

A package of 15 computer disks cost \$47.25. Each disk cost the same amount. How much did each disk cost?

9 Solve Simple Word Problems

B Solve 2-step problems involving whole numbers and money amounts

Solve this problem.

Rob's baseball card collection was organized in 3 boxes with 175 cards in each box. He hopes to have 4 times as many cards as he has now after his visit to the Baseball Card Collectors' Convention. How many cards does Joe hope to have after the convention?

9 Solve Simple Word Problems

C Solve 2-step problems and explain how the solution was determined

Jenn bought 3 tops that each cost \$12.95. She gave the clerk a \$50 bill. If there is no tax on the tops, how much change should Jenn receive?

Explain how you arrived at your answer.

10 Numerical Estimation Strategies

A Identify the best expression to find an estimate

Ellen needs to subtract 31,919 from 79,899. Which of the following would be BEST for Ellen to use to ESTIMATE the difference?

- 80,000 – 30,000 *
- 80,000 – 40,000
- 70,000 – 30,000
- 70,000 – 40,000

10 Numerical Estimation Strategies

B Identify whether and why a particular strategy will result in an overestimate or an underestimate

To ESTIMATE the product of 521 and 613, John multiplied 500×600 . Will John's estimate be MORE or LESS than the actual sum?

More, because he rounded both numbers up.

More, because he rounded both numbers down.

Less, because he rounded both numbers up.

Less, because he rounded both numbers down.*

10 Numerical Estimation Strategies

C Determine a reasonable estimate and describe the strategy used to make the estimate

Karen wants to ESTIMATE the number of ounces in 8 cases of soda. Each can contains 12 ounces and there are 24 cans in a case.

What would be a GOOD ESTIMATE?

Explain how you made your estimate.

11 Estimating Solutions to Problems

A Estimate a reasonable answer to a problem

Ben rode on the bus $37 \frac{1}{4}$ miles the first week of school and $29 \frac{7}{8}$ miles the second week. ABOUT how many miles did he ride on the bus during the two weeks?

Fewer than 60

A little more than 60

A little less than 70*

More than 70

11 Estimating Solutions to Problems

B Use estimation to make and defend decisions

Becky earned \$23,994 the first year after she graduated from college. Her second year she earned \$24,993. To pay back her loans, she needed to earn more than \$50,000 her first two years after college.

Explain how you could use ESTIMATION to decide if Becky earned over \$50,000 her first two years after college.

14 Time

A Solve problems involving elapsed time

Joe saw a movie that began at 5:10 p.m. and ended at 6:40 p.m. How long was the movie?

- 1 hour 45 minutes
- 1 hour 40 minutes
- 1 hour 20 minutes
- 1 hour 30 minutes*

14 Time

B Solve problems involving the conversion of measures of time

A jogger runs for 20 minutes each day. How many hours does he spend running in 4 days?

- 2 hours
- 1 hour and 5 minutes
- 1 hour and 30 minutes
- 1 hour and 20 minutes*

15 Approximate Measures

A Estimate lengths and areas



If the shorter tree is about 5 feet tall, the height of the taller tree is ABOUT

- 15 ft
- 12 ft
- 8 ft*
- 6 ft

16 Customary and Metric Measures

A Solve problems involving the conversion of measures of length

A basketball player is 209 centimeters tall. How many meters is that?

16 Customary and Metric Measures

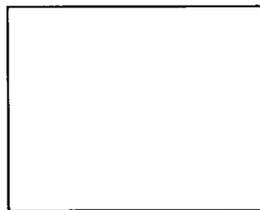
B Measure lengths to the metric or customary unit specified

Use your centimeter ruler to measure the length of the line segment between points A and B to the NEAREST half centimeter.

16 Customary and Metric Measures

C Measure and determine perimeter and area

Use your centimeter ruler to measure the lengths of each side of this rectangle. Label the lengths of the sides and determine the PERIMETER of the rectangle.



PERIMETER = ____

16 Customary and Metric Measures

D Identify appropriate metric or customary units of measure (length, capacity, mass) for a given situation

The length of the floor in a gym is BEST measured in

- meters.*
- centimeters.
- kilometers.
- Liters.