

# Sample Item(s) Per Content Strand

## Grade 6

### 1 Place Value

A Solve problems involving 100 and 1,000 more or less

On Monday 285 concert tickets were sold. By Tuesday 100 more tickets had been sold. How many tickets had been 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 3,815?

$3000 + 800 + 10 + 5$

$3000 + 800 + 10 + 50$

$3000 + 80 + 100 + 5$

$300 + 80 + 100 + 5$

### 1 Place Value

C Identify alternative forms of expressing whole numbers less than 10,000 using regrouping

Which means the same as 7,500?

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

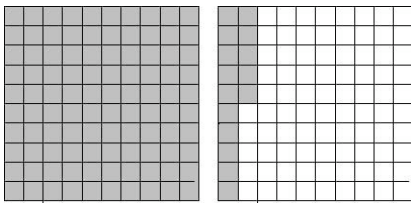
3451

5431

391

## 2 Pictorial Representations of Numbers

A Relate decimals (0.01-2.99) to pictorial representations



The shaded part of this picture shows which decimal number?

1.35

1.25

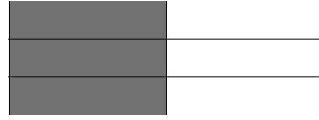
1.15

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?



$\frac{3}{8}$

$\frac{3}{4}$

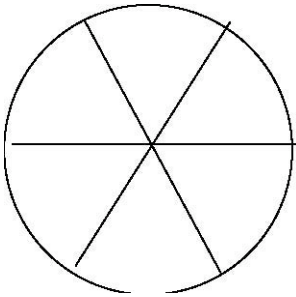
$\frac{3}{5}$

$\frac{3}{6}$

## 2 Pictorial Representations of Numbers

**C** Relate fractions and mixed numbers to pictures and vice versa

Shade in  $\frac{1}{6}$  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  $2\frac{3}{5}$ ?

$\frac{10}{5}$

$\frac{12}{5}$

$\frac{13}{5}$

$\frac{14}{5}$

#### 4 Order, Magnitude and Rounding of Numbers

##### A Order whole numbers less than 100,000

Renee is studying the Great Lakes in geography class. She 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 each lake 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

##### Order, Magnitude and Rounding of Numbers B Order mixed numbers

[including fractions] and decimals

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

Which of Bill's friends was 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 magnitude of whole numbers less than 100,000

Amanda collected between 4,600 and 5,800 pounds of newspaper for recycling. Which could be the amount she collected?

5120

3960

4410

5970

#### **Order, Magnitude and Rounding of Numbers**

**D** Describe magnitude of mixed numbers [including fractions] 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 she bought?

$4 \frac{1}{4}$  pounds

$5 \frac{1}{4}$  pounds

$7 \frac{3}{4}$  pounds

$3 \frac{3}{4}$  pounds

#### **Order, Magnitude and Rounding of Numbers**

**E** Round whole numbers in a context

There were 6,852 people at the game. This number is ABOUT

5000

6000

7000

8000

## Order, Magnitude and Rounding of Numbers

**F** Round decimals in a context

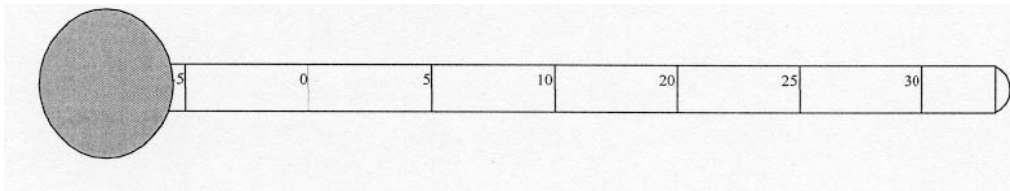
Susan bought 2.1 pounds of pet food. This amount rounded to the NEAREST whole number is

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

## 4 Order, Magnitude and Rounding of Numbers

**G** Locate **numbers** on number lines, scales and grids

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 number sentences

Write a story problem that can be solved using the number sentence  $8 \times 4 = \underline{\quad}$

## 6. Basic Facts

**A** Multiply and divide facts

Solve this problem

$$8 \times 7 =$$

$$63 \div 7 =$$

## 7 Computation with Whole Numbers and Decimals

**A** Add and subtract 2-, 3- and 4-digit whole numbers and money amounts less than \$100 [expressed with decimal notation]

Solve this problem  $\$69.99 - \$2.34 =$

## 7. Computation with Whole Numbers and Decimals

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

$$\$10 \times 40 =$$

\$4000

\$400

\$40

\$4

## 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

$$345 \times 4 =$$

$$\$8.56 \div 4 =$$

## 8 Computation with Fractions

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 costs 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 and explain solutions to 2-step problems involving whole numbers and money amounts

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 got 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, Ernesto multiplied  $500 \times 600$ . Would Ernesto's estimate be MORE or LESS than the actual product?

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.

## **11 Estimating Solutions to Problems**

Estimate a reasonable answer to a problem

Charlie rode on the bus  $37 \frac{1}{2}$  miles the first week of school and  $28 \frac{1}{2}$  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

## **14 Time**

**A** Solve problems involving elapsed time

Rocco 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