



**ATOMIC  
Spring Conference  
March 14, 2005**

**Excelling at Estimation  
Grades 3-5**

**CMT Objective 11A  
(4<sup>th</sup> Gen):  
Identify a Reasonable  
Estimate to a Problem**

**SAMPLE ITEMS  
ONLY**

**Strand 4:** Round whole numbers in a context. (Grades 3 – 5) 4<sup>th</sup> Gen.

Jo had 31 plastic bags. This number is a little

- less than 30.
- more than 30
- less than 40
- more than 40.

It is 2,885 miles from New York City to Portland, Oregon. This number is

- a little less than 2000
- a little more than 2000
- a little less than 3000
- a little more than 3000

Gabriella earned \$588. Which number is **closest** to this amount?

- \$590
- \$600
- \$610
- \$620

The State of Florida has 53,927 square miles of land. The number is **closest** to

- 51,000
- 52,000
- 53,000
- 54,000

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**Strand 10:** Identify the best expression to find an estimate 4<sup>th</sup> Gen..

Grade 3: Addition, Subtraction, Problems involving change

Grades 4 and 5: Addition, Subtraction, Multiplication, Division, Problems involving change, Fractions, Mixed Numbers, Decimals

Many CMT problems will probably be placed in specific situations similar to the problem below.

Grade 4 Type Problem:

Josie needs to multiply  $825 \times 977$ . Which of the following would be **BEST** for Josie to use to **ESTIMATE** the product?

- $800 \times 900$
- $800 \times 1000$
- $900 \times 900$
- $900 \times 1000$

Grade 5 Type Problem

There were 78,265 people sitting at the game. There is room for 90,000 people. Which of the following would be **best** to use to **estimate** the number of empty seats?

- $90,000 - 70,000$
- $90,000 - 80,000$
- $100,000 - 70,000$
- $100,000 - 80,000$

Grade 3 CMT (4<sup>th</sup> Generation) – Objective 11: Identify a reasonable solution to a problem.

Sarah painted 113 fences. Brooke painted 288 fences. **About** how many fences did the girls paint in all?

- Less than 300
- About 350
- About 400
- More than 450

Lauren had 828 roses in her garden. One night 398 roses died from frost. **About** how many roses lived?

- 400
- 500
- 600
- 700

Kim drove 58 miles to buy a horse. Then he drove 33 miles to buy food for the horse. **About** how many miles did Kim drive ?

- Less than 70
- About 80
- Close to 90
- More than 100

John worked 28 hours last week and 49 hours this week correcting papers. **About** how many hours did he work in all?

- a little more than 60
- a little more than 70
- a little less than 80
- a little less than 90

Joshua had 32 music CDs. He bought 49 more CDs. **About** how many CDs does he now have?

- 50
- 60
- 70
- 80

Harry has 49 frogs in his back yard. Potter has 32 frogs. **About** how many frogs do they have all together?

- a little less than 60
- a little less than 70
- a little more than 80
- a little more than 90

Sally had 19 cookies. Jane had 29 cookies. **About** how many cookies did they have in all?

- A little more than 40
- A little less than 50
- A little less than 60
- A little more than 60

There are 12 red hats and 47 blue hats on a table. **About** how many hats are there in all?

- A little less than 60
- A little more than 60
- A little more than 70
- A little less than 70

Ann has 27 pencils. Clark has 49 pencils. **About** how many pencils do they have altogether?

- a little less than 70
- a little more than 70
- a little less than 80
- a little more than 80

A lion weighs 524 pounds. A giant panda weighs 312 pounds. **About** how many pounds do the two animals weigh?

- a little less than 800
- a little more than 800
- a little less than 900
- a little less than 900

There are 51 printers for sale at Wall-Mart and 17 printers for sale at Kay Mart. **About** how many printers are there for sale altogether?

- A little less than 50
- A little more than 60
- A little less than 70
- A little more than 70

Hector bought 23 new shirts. He also bought 81 new pants. **About** how many more new pants did he buy than new shirts?

- a little less than 50
- a little more than 50
- a little less than 60
- a little more than 60

Mrs. Grant baked 47 cookies last week. She baked 29 cookies this week. **About** how many more cookies did she bake last week than this week?

- a little less than 20
- a little less than 30
- a little less than 40
- a little more than 40

Ms Crowley baked 78 cookies for the third graders. The children ate 57 cookies. **About** how many cookies were not eaten?

- a little less than 20
- a little more than 20
- a little less than 30
- a little more than 30

George made 48 dog houses. He sold 19. **About** how many dog houses does he still have?

- a little less than 20
- a little more than 20
- a little less than 30
- a little more than 30

Mr. DiGarbo lifted 99 pounds of gold bars. Mrs. DiGarbo lifted 41 pounds on gold bars. **About** how many more pounds did Mr. DiGarbo lift?

- a little less than 50
- a little more than 50
- a little less than 60
- a little more than 60

Madison can jump rope for 28 minutes without stopping. Jake can jump for 67 minutes without stopping. **About** how more minutes can Jake jump than Madison?

- a little less than 30
- a little more than 30
- a little less than 40
- a little more than 40

Charlene drove 83 miles in her new Lamborghini. Her husband drove 22 miles in Charlene's new Lamborghini. **About** how many more miles did Charlene drive than her husband?

- a little more than 50
- a little less than 50
- a little more than 60
- a little less than 60



Maria bought 2 pens ranging in price from \$3 to \$6. Which could be the amount of money she spent on the pens in all?

- 2
- 3
- 5
- 7

There were 10 calculators on the teacher's desk ranging in weight from 5 to 7 ounces. How much could the calculators weigh altogether?

- 20
- 40
- 60
- 80

Nikki typed between 5 and 10 pages every hour for 5 hours. **About** how many pages could she have typed altogether?

- 15
- 35
- 55
- 75

Karen sewed 28 purple skirts and 39 blue skirts. **About** how many skirts did Karen sew?

- less than 30
- between 30 and 40
- between 40 and 50
- more than 55

Georgi ran between 2 and 8 miles every day for 5 days. **About** how many miles could he have run?

- 5
- 8
- 12
- 50

Count Dracula bought a new coffin for \$287 and a new black suit for \$599. **About** how much money did he spend in all?

- less than \$700
- between \$700 and \$800
- between \$800 and \$900
- more than \$900

*Shop & Shop* sold 631 turkeys last week. *Shop Right* sold 295 turkeys the same week. **About** how many more turkeys did *Shop & Shop* sell than *Shop Right* ?

- less than \$200
- between \$300 and \$400
- close to \$500
- more than \$600

Grade 4 CMT (4<sup>th</sup> Generation) – Objective 11(a): Identify a reasonable solution to a problem, including estimating change from \$1, \$5, \$10.

Allyson found 225 marbles on Monday and 392 marbles on Friday. Which is a REASONABLE estimate for the number of marbles she found?

- 500
- 600
- 700
- 800

A thresher shark weighed 498 pounds. A tiger shark weighed 927 pounds. **About** how many pounds did the two sharks weigh altogether?

- Less than 1000 pounds
- About 1500 pounds
- About 2000 pounds
- More than 2500 pounds

Mari had \$529. She spent \$199 on a new photo printer. **About** how much money did she have left?

- \$310
- \$320
- \$330
- \$340

The bakery sold 521 chocolate cakes and 314 vanilla cakes. **About** how many cakes did they sell?

- a little less than 800
- a little more than 800
- a little less than 900
- a little more than 900

Michele bought 48 blue pens. She also bought 19 purple pens. **About** how many pens did she buy?

- Less than 50
- About 60
- Close to 70
- More than 80

The third graders collected 424 bags of food for the Food Drive. The fourth graders collected 702 bags. **About** how many more bags did the fourth graders collect than the third graders?

- a little less than 200
- a little more than 200
- a little less than 300
- a little more than 300

The third graders collected 128 pennies. The fourth graders collected 496 pennies. **About** how many pennies were collected in all?

- a little less than 500
- a little less than 600
- a little more than 500
- a little less than 600

The library checked out between 5 and 10 books an hour for 8 hours. **About** how many books could they have checked out?

- 15
- 30
- 55
- 90

Tommy bought 4 new pairs of sneakers ranging in price from \$31 to \$68 each. Which could be the amount of money he spent on all 4 pairs of sneakers?

- \$200
- \$300
- \$400
- \$500

Sarah studied between 6 and 12 hours every week for 4 weeks until the big test. Which is the number of hours Sarah could have studied for the big test?

- 10
- 25
- 50
- 65

The train travels 488 miles on Mondays. It travels 220 miles on Saturdays. **About** how many more miles does the train travel on Mondays than Saturdays?

- Less than 100
- Between 200 and 300
- Close to 350
- More than 400

Peter spent \$77 on books last week. He spent \$96 on books the week before. **About** how much money did he spend on books?

- Less than \$100
- Between \$100 and \$200
- Between \$200 and \$300
- More than \$300

Mike bought a flashlight for \$2.98. What is a **reasonable** estimate of the change he received from \$5.00?

- \$1.00
- \$2.00
- \$3.00
- \$4.00

Betty bought a blue ball for \$2.98. She gave the clerk \$5. **About** how much change did she receive?

- a little less than \$2
- a little more than \$2
- a little less than \$3
- a little more than \$3

Suzanne bought a snow shovel for \$6.95. What is a **reasonable** estimate of the change she received from \$10.00?

- \$1.00
- \$2.00
- \$3.00
- \$4.00

Raphael bought an extra large candy bar for \$6.85. He paid for the candy bar with a \$10 bill. **About** how much change should he get from the clerk?

- a little less than \$2
- a little more than \$2
- a little less than \$3
- a little more than \$3

Juan bought a book for \$7.15. He paid for it with a \$10.00 bill. **About** how much change should he receive?

- A little less than \$2
- A little more than \$2
- A little less than \$3
- A little more than \$3

Grade 5 – Objective 11(a): Identify a reasonable answer to a problem, including estimating change.

Rachel and Kim went to Cuba for a vacation. On the way to Cuba, the plane made the trip in 4315 minutes. On the return trip, the flight took 3816 minutes. **About** how many minutes did the round trip take?

- 8,000
- 9,000
- 10,000
- 11,000

The average length of a man's thighbone is 50.50 centimeters. The average length of a man's hipbone is 18.79 centimeters. **About** how much longer is the thighbone than the hipbone?

- 10 cm
- 20 cm
- 30 cm
- 40 cm

Rachel and Kim went to Cuba for a vacation. On the way to Cuba, the plane made the trip in 4315 minutes. On the return trip, the flight took 3816 minutes. **About** how long did the round trip take?

- 8,100
- 8,200
- 8,300
- 8,400

Scott bought  $\$1$  pounds of dark chocolate and  $\$9$  pounds of white chocolate. **About** how many pounds of chocolate did Scott buy?

- 6
- 7
- 8
- 9

Last year Pedro earned \$39,895. The year before, he earned \$29,261. **About** how much money did he earn in the two years?

- less than \$55,000
- about \$60,000
- about \$70,000
- more than \$75,000

Fred sold 5196 bikes last year. He sold 3977 bikes this year. **About** how many bikes did he sell in both years?

- a little less than 8,000
- a little more than 8000
- a little less than 9000
- a little more than 9000

The math team ordered 25 pizzas. They ate  $18\frac{5}{6}$  pizzas. **About** how many pizzas were not eaten?

- A little less than 5
- A little more than 5
- A little less than 10
- A little more than 10

Sandy spent between \$2.50 and \$8.50 every week for 8 weeks on plants for her new house.. Which could be the amount of money that Sandy spent in all?

- \$ 10
- \$ 50
- \$ 90
- \$130

Tanner bought  $5\frac{3}{4}$  pounds of nails on Monday. He went back to the hardware store on Tuesday and bought  $3\frac{9}{10}$  pounds of nails. **About** how many pounds of nails did Tanner buy?

- A little less than 8 pounds
- Close to  $8\frac{1}{2}$  pounds
- Between 9 and 11 pounds
- More than 12 pounds

Seven snails each traveled between 48 and 53 inches in an hour. **About** how many inches could the 7 snails have traveled all together?

- 250
- 310
- 370
- 430

Tomas cut a piece of wood 29.92 centimeters in length. He needs to cut off 8.15 more centimeters. **About** long will the piece of wood then be?

- a little less than 20 cm
- a little more than 20 cm
- a little less than 30 cm
- a little more than 30 cm

There are 6 cities in Connecticut that each have a population of between 50,000 and 60,000. **About** how many people live in those six cities?

- 260,000
- 340,000
- 390,000
- 430,000

Nicole purchased 5 lipsticks ranging in price from \$10 to \$15. Which could be the amount of money she spent on the lipsticks altogether?

- \$25
- \$35
- \$45
- \$55

A tiger shark weighs 1,043 pounds. A great white shark weighs 4,731 pounds. **About** how much more does the great white shark weigh?

- Less than 3000
- Between 4000 and 5000
- Between 5000 and 6000
- More than 7000

Mr. Larson lost between 41 and 55 pounds every month for 10 months. **About** how many pounds could Mr. Larson have lost in 10 months?

- 20
- 45
- 60
- 85

Jocelyn bought a TV for \$470.99. She gave the clerk \$500.00. What is a **reasonable** estimate of the change she should receive from the clerk?

- Less than \$25
- Between \$25 and \$35
- Between \$35 and \$45
- More than \$45

It rained in Hawaii anywhere from 425 inches to 475 inches every year for 6 years. Which could be the total number of inches it rained in 6 years in Hawaii?

- 1000 inches
- 2000 inches
- 3000 inches
- 4000 inches

Martha saved \$835.96 at the grocery store last year. George saved \$296.12 last year at the grocery store. **About** how much more money did Martha save than George?

- Less than \$400
- Between \$400 and \$500
- Between \$500 and \$600
- More than \$600

George ate 13 mini pizzas in one month. Martha ate 1 mini pizzas in the same month.

**About** how many more mini pizzas did George eat than Martha?

- less than 5
- between 6 and 8
- between 9 and 11
- more than 12

Jill bought a new Harry Potter Lego set for \$39.93 (including tax). She gave the clerk \$50. **About** how much change should she receive?

- a little less than \$10
- a little more than \$10
- a little less than \$20
- a little more than \$20

Hector bought a new pair of Sneakers for \$38.99. He paid for them with a \$50 bill. What would be a **reasonable** estimate for the change he should get back?

- \$10
- \$20
- \$30
- \$40

Christina paid \$14.95 for a new book. She gave the clerk \$20. **About** how much change should she receive?

- a little more than \$5
- a little less than \$5
- a little less than \$6
- a little more than \$6

# In the Ball Park

