



2009 – Grade 3 - NYS Math Exam
Item #1

Strand: Number Sense and Operations

Performance Indicator: 3.N07 Use 1 as the identity element for multiplication

Points: 1

What number belongs on the line below to make the number sentence true?

$$6 \times \underline{\quad ? \quad} = 6$$

- A 0
- B 1
- C 12
- D 36

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Item #2

Strand: Measurement

Performance Indicator: 3.M07 Count and represent combined coins and dollars, using currency symbols (\$0.00)

Points: 1

William spends the coins shown below to buy a cookie.



Quarter



Dime



Dime



Nickel



Penny



Penny

How much money does William spend?

- A \$0.42
- B \$0.47
- C \$0.52
- D \$0.57

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Item #3

Strand: Number Sense and Operations

Performance Indicator: 3.N03 Compare and order numbers to 1,000

Points: 1

Dan enters a bike race. The number below is on his shirt.



Which number is **greater** than the number on Dan's shirt?

- A** 680
- B** 765
- C** 697
- D** 739



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Item #4

Strand: Number Sense and Operations

Performance Indicator: 3.N04 Understand the place value structure of the base ten number system:

10 ones = 1 ten

10 tens = 1 hundred

10 hundreds = 1 thousand

Points: 1

Mr. Norton ordered 1,398 new books for his bookstore. When the books arrived, he counted only 1,348 new books. By how much is the number 1,398 greater than 1,348?

- A 5 ones
- B 5 tens
- C 5 hundreds
- D 5 thousands

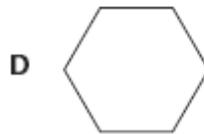
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Item #5

Strand: Geometry

Performance Indicator: 3.G01 Define and use correct terminology when referring to shapes (circle, triangle, square, rectangle, rhombus, trapezoid, and hexagon)

Points: 1

Which shape has only 3 angles?





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Item #6

Strand: Number Sense and Operations

Performance Indicator: 3.N18 Use a variety of strategies to add and subtract 3-digit numbers (with and without regrouping)

Points: 1

On Eric's road trip, he counted 59 sheep and 161 horses. What was the total number of sheep and horses that Eric counted during his road trip?

- A 110
- B 120
- C 210
- D 220

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Item #7

Strand: Number Sense and Operations

Performance Indicator: 3.N21 Use the area model, tables, patterns, arrays, and doubling to provide meaning for multiplication

Points: 1

Dana baked the cupcakes shown below.



Which expression can be used to find the total number of cupcakes Dana baked?

- A 3×6
- B 6×6
- C $3 + 6$
- D $6 + 6$

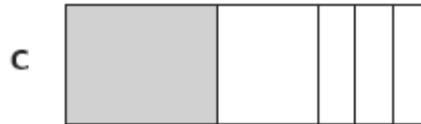
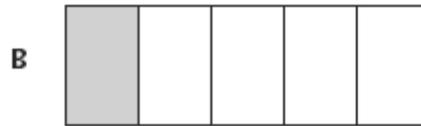
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Item #8

Strand: Number Sense and Operations

Performance Indicator: 3.N13 Recognize fractional numbers as equal parts of a whole

Points: 1

Which figure is $\frac{1}{5}$ shaded?





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Item #9

Strand: Algebra

Performance Indicator: 3.A02 Describe and extend numeric (+, -) and geometric patterns

Points: 1

Eva wrote the number pattern below.

37, 34, 31, ? , 25

What is the missing number in Eva's number pattern?

- A** 26
- B** 28
- C** 29
- D** 30

**2009 – Grade 3 - NYS Math Exam
Item #10**

Strand: Measurement

Performance Indicator: 3.M07 Count and represent combined coins and dollars, using currency symbols (\$0.00)

Points: 1

Tony spends \$0.61 for an apple. Which group of coins shows exactly \$0.61?





2009 – Grade 3 - NYS Math Exam Item #11

Strand: Number Sense and Operations

Performance Indicator: 3.N06 Use and explain the commutative property of addition and multiplication

Points: 1

Tara writes the number sentence below.

$$20 + 15 + 30 = 30 + 15 + \underline{\quad ? \quad}$$

What number belongs on the line to make the number sentence true?

- A 20
- B 30
- C 45
- D 65

2009 – Grade 3 - NYS Math Exam
Item #12

Strand: Number Sense and Operations

Performance Indicator: 3.N10 Develop an understanding of fractions as part of a whole unit and as parts of a collection

Points: 1

Reggie built the birdhouses shown below.



What fraction of Reggie's birdhouses are black?

- A $\frac{1}{2}$
- B $\frac{1}{3}$
- C $\frac{1}{4}$
- D $\frac{1}{5}$



2009 – Grade 3 - NYS Math Exam Item #13

Strand: Algebra

Performance Indicator: 3.A01 Use the symbols $<$, $>$, $=$ (with and without the use of a number line) to compare whole numbers and unit fractions ($1/2, 1/3, 1/4, 1/5, 1/6$, and $1/10$)

Points: 1

Jasmin wrote the number sentence below.

$$\underline{\hspace{1cm}} < 856$$

Which number belongs on the line to make the number sentence true?

- A 862
- B 914
- C 891
- D 789

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Item #14

Strand: Measurement

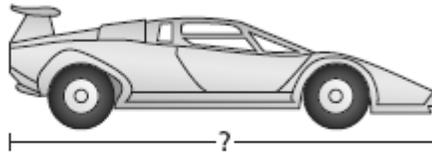
Performance Indicator: 3.M02 Use a ruler/yardstick to measure to the nearest standard unit (whole and 1/2 inches, whole feet, and whole yards)

Points: 1



Use your ruler to help you solve this problem.

How many inches long is the race car shown below?



- A $2\frac{1}{2}$
- B 3
- C $3\frac{1}{2}$
- D 4

**2009 – Grade 3 - NYS Math Exam
Item #15**

Strand: Geometry

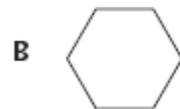
Performance Indicator: 3.G04 Identify the faces on a three-dimensional shape as two-dimensional shapes

Points: 1

Chris has a can of paint like the one shown below.



What is the shape of the top of the can of paint?





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Item #16

Strand: Number Sense and Operations

Performance Indicator: 3.N25 Estimate numbers up to 500

Points: 1

Mark's school has 18 small windows, 49 medium windows, and 52 large windows. Estimate how many windows Mark's school has in all.

- A 100
- B 110
- C 120
- D 130

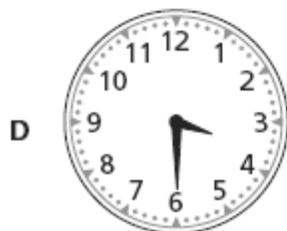
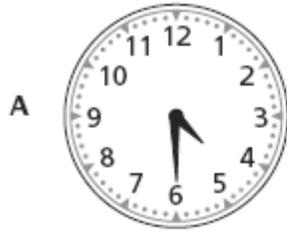
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Item #17

Strand: Measurement

Performance Indicator: 3.M09 Tell time to the minute, using digital and analog clocks

Points: 1

Maya gets on a bus at 3:30 P.M. Which clock correctly shows the time Maya gets on the bus?



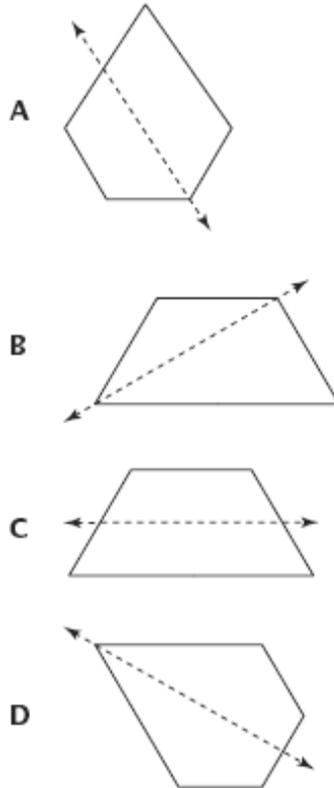
**2009 – Grade 3 - NYS Math Exam
Item #18**

Strand: Geometry

Performance Indicator: 3.G05 Identify and construct lines of symmetry

Points: 1

Which figure shows a line of symmetry?





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Item #19

Strand: Measurement

Performance Indicator: 3.M01 Select tools and units (customary) appropriate for the length measured

Points: 1

Which unit of measure is **best** to use to measure the length of a crayon?

- A inch
- B foot
- C yard
- D gram

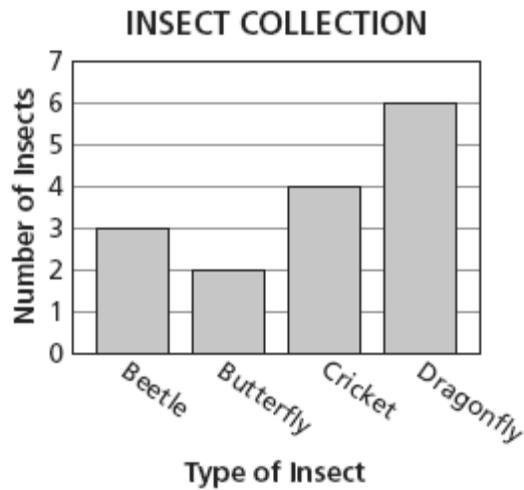
**2009 – Grade 3 - NYS Math Exam
Item #20**

Strand: Statistics and Probability

Performance Indicator: 3.S07 Read and interpret data in bar graphs and pictographs

Points: 1

The bar graph below shows the number of each type of insect Ashley has in her insect collection.



What is the total number of insects in Ashley's collection?

- A** 6
- B** 9
- C** 15
- D** 18



**2009 – Grade 3 - NYS Math Exam
Item #21**

Strand: Number Sense and Operations

Performance Indicator: 3.N08 Use the zero property of multiplication

Points: 1

Felix wrote the number sentence below.

$$16 \times \underline{\quad ? \quad} = 0$$

What number belongs on the line to make the number sentence true?

- A 0
- B 1
- C 4
- D 16

**2009 – Grade 3 - NYS Math Exam
Item #22**

Strand: Algebra

Performance Indicator: 3.A02 Describe and extend numeric (+, -) and geometric patterns

Points: 1

22 Ryan makes the pattern of triangular shapes shown below.

Row 1	  
Row 2	     
Row 3	        
Row 4	?
Row 5	              

How many triangular shapes should there be in Row 4 in Ryan's pattern?

- A 9
- B 10
- C 11
- D 12



2009 – Grade 3 - NYS Math Exam
Item #23

Strand: Number Sense and Operations

Performance Indicator: 3.N16 Identify odd and even numbers

Points: 1

Which set of numbers has **only** even numbers?

- A 7, 9, 11, 13
- B 4, 7, 9, 10
- C 8, 9, 10, 11
- D 6, 10, 14, 18

2009 – Grade 3 - NYS Math Exam
Item #24

Strand: Number Sense and Operations

Performance Indicator: 3.N19 Develop fluency with single-digit multiplication facts

Points: 1

Which two number sentences below have the same answer?

$$2 \times 8 = \underline{\quad ? \quad}$$

$$2 \times 9 = \underline{\quad ? \quad}$$

$$3 \times 7 = \underline{\quad ? \quad}$$

$$4 \times 4 = \underline{\quad ? \quad}$$

A $2 \times 8 = \underline{\quad ? \quad}$ and $4 \times 4 = \underline{\quad ? \quad}$

B $2 \times 8 = \underline{\quad ? \quad}$ and $3 \times 7 = \underline{\quad ? \quad}$

C $2 \times 9 = \underline{\quad ? \quad}$ and $4 \times 4 = \underline{\quad ? \quad}$

D $2 \times 9 = \underline{\quad ? \quad}$ and $3 \times 7 = \underline{\quad ? \quad}$

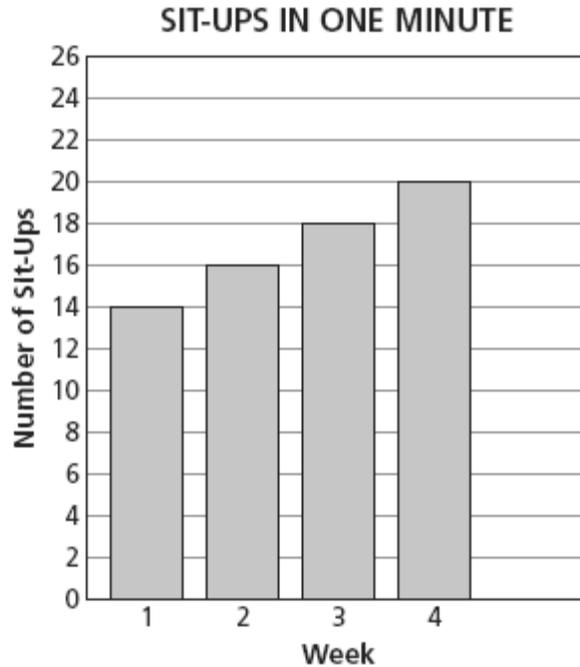
**2009 – Grade 3 - NYS Math Exam
Item #25**

Strand: Statistics and Probability

Performance Indicator: 3.S08 Formulate conclusions and make predictions from graphs

Points: 1

Gary is practicing sit-ups. The bar graph below shows the number of sit-ups he can complete in one minute during a four-week period.



If the pattern continues for one more week, how many sit-ups will Gary be able to complete in one minute in Week 5?

- A 20
- B 22
- C 24
- D 26



2009 – Grade 3 - NYS Math Exam
Item #26

Strand: Number Sense and Operations

Performance Indicator: 3.N19 Develop fluency with single-digit multiplication facts

Points: 2

Justine brings the napkins for a picnic. She brings 3 napkins for each of the 9 people at the picnic. How many napkins does Justine bring to the picnic?

Show your work.

Answer _____ napkins



2009 – Grade 3 - NYS Math Exam
Item #27

Strand: Number Sense and Operations

Performance Indicator: 3.N18 Use a variety of strategies to add and subtract 3-digit numbers (with and without regrouping)

Points: 2

Last year, a school sold 638 tickets to their school fair. This year, 287 fewer tickets were sold than last year. How many tickets to the fair did the school sell this year?

Show your work.

Answer _____ tickets

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Item #28

Strand: Geometry

Performance Indicator: 3.G01 Define and use correct terminology when referring to shapes (circle, triangle, square, rectangle, rhombus, trapezoid, and hexagon)

Points: 2

28 Anna draws the shapes below.



Part A

Write a large X over the trapezoid.

Part B

One of the shapes Anna draws is a hexagon. On the lines below, write **one** way a hexagon is different from a trapezoid.

**2009 – Grade 3 - NYS Math Exam
Item #29**

Strand: Statistics and Probability

Performance Indicator: 3.S07 Read and interpret data in bar graphs and pictographs

Points: 2

At Dalton’s school, there is a Lost and Found box. The pictograph below shows the number of hats in the Lost and Found box during three months.

HATS IN LOST AND FOUND BOX

Month	Number of Hats
January	
February	
March	

KEY
 = 5 hats

How many **more** hats are in the Lost and Found box in February than in January?

Show your work.

Answer _____ hats

2009 – Grade 3 - NYS Math Exam Item #30

Strand: Algebra

Performance Indicator: 3.A02 Describe and extend numeric (+, -) and geometric patterns

Points: 3

The table below shows the number of minutes Carrie practiced dancing on four different days.

**CARRIE'S DANCE
PRACTICE**

Day	Minutes
Day 1	18
Day 2	25
Day 3	32
Day 4	39
Day 5	?

If the pattern in the table continues, how many minutes will Carrie practice dancing on Day 5?

Answer _____ minutes

On the lines below, explain how you found your answer.

If the pattern in the table continues for a few more days, on what day will Carrie practice dancing for 53 minutes?

Answer Day _____

**2009 – Grade 3 - NYS Math Exam
Item #31**

Strand: Statistics and Probability

Performance Indicator: 3.S05 Display data in pictographs and bar graphs

Points: 3

The table below shows the number of each type of sandwich remaining in the school cafeteria after lunch on Wednesday.

WEDNESDAY’S SANDWICHES

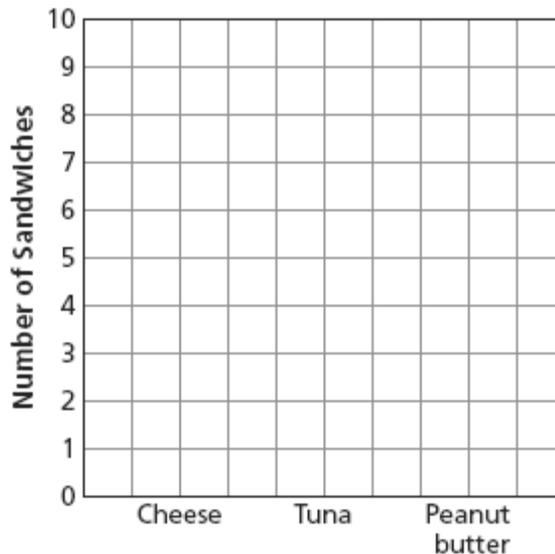
Type	Number of Sandwiches
Cheese	6
Tuna	2
Peanut butter	9

On the grid below, complete the bar graph to show the type and number of sandwiches remaining in the cafeteria after lunch on Wednesday.

Be sure to

- label the blank axis
- graph all the data

WEDNESDAY’S SANDWICHES





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