# Math Grade 4 Assessment Anchors and Eligible Content



# Pennsylvania Department of Education <u>www.pde.state.pa.us</u> Updated August 2010

**Reporting Category** 

#### ASSESSMENT ANCHOR

M4.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.

	ELIGIBLE CONTENT	
M4.A.1.1 Use models and/or words to represent quantities as decimals, fractions or mixed numbers.	M4.A.1.1.1 Write the fraction or decimal, including mixed numbers, which corresponds to a drawing or set – no simplification necessary.	
	<b>M4.A.1.1.2</b> Create a drawing or set that represents a given fraction or decimal, including mixed numbers (through the tenths).	
	M4.A.1.1.3 Match the standard number form to the word form of decimal numbers (through the tenths place).	÷
	M4.A.1.1.4 Write whole numbers in expanded, standard and/or word form through 6 digits (example of standard to expanded form: 43,076 = 40,000+3000+70+6).	

#### **EXAMPLE ITEMS**

• Which shows 3/4 of the picture shaded?



(NAEP)

(NAEP)

• What fraction of this large square is shaded?

**Reporting Category** 



(New York State Department of Education)

- **2.1.4.A** Apply number **patterns** and relationships to count and compare values of whole numbers and simple fractions, and decimals.
- **2.1.4.B** Represent **equivalent forms** of the same whole number, the same fraction, or the same decimal through the use of concrete objects, drawings, word names, and symbols.
- **2.1.4.C** Use drawings, diagrams, or **models** to show the concept of a fraction as a part of a set and as division of a whole number by a whole number.
- **2.1.4.D** Apply place value concepts and base-ten numeration to order and compare larger whole numbers.
- 2.1.4.E Apply factors and multiples to represent larger numbers in various ways.

Pennsylvania Department of Education

**Reporting Category** 

#### ASSESSMENT ANCHOR

M4.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.

		ELIGIBLE CONTENT
<b>M4.A.1.2</b> Compare quantities and magnitudes of numbers.	M4.A.1.2.1	Locate/identify fractions or decimals on a number line (decimals and fractions through the tenths – do not mix fractions and decimals).
	M4.A.1.2.2	Compare and/or order whole numbers through 6 digits and amounts of money to \$100 (limit sets for ordering, to no more than 4 numbers).

#### **EXAMPLE ITEMS**

#### Reference:

- **2.1.4.A** Apply number **patterns** and relationships to count and compare values of whole numbers and simple fractions, and decimals.
- **2.1.4.D** Apply place value concepts and base-ten numeration to order and compare larger whole numbers.
- **2.1.4.B** Represent **equivalent forms** of the same whole number, the same fraction, or the same decimal through the use of concrete objects, drawings, word names, and symbols.
- **2.1.4.C** Use drawings, diagrams, or **models** to show the concept of a fraction as a part of a set and as division of a whole number by a whole number.
- 2.1.4.E Apply factors and multiples to represent larger numbers in various ways.

Math Grade 4

Pennsylvania Department of Education

# **Reporting Category**

#### ASSESSMENT ANCHOR

M4.A.1 Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.

M4.A.1.3 Develop and/or apply number theory concepts to represent numbers in various ways

# ELIGIBLE CONTENT

**M4.A.1.3.1** Find/list/identify all factors through 10 of any given number.

M4.A.1.3.2 Find/list/identify multiples of a number, where the multiples do not exceed 100.

#### **EXAMPLE ITEMS**

#### Reference:

- **2.1.4.E** Apply factors and multiples to represent larger numbers in various ways.
- **2.1.4.F** Understand the concepts of addition and subtraction and their **inverse** relationships; understand the concepts of multiplication and division; use the four basic operations to solve problems, including word problems and **equations**.
- **2.1.4.A** Apply number **patterns** and relationships to count and compare values of whole numbers and simple fractions, and decimals.
- **2.1.4.B** Represent **equivalent forms** of the same whole number, the same fraction, or the same decimal through the use of concrete objects, drawings, word names, and symbols.
- **2.1.4.C** Use drawings, diagrams, or **models** to show the concept of a fraction as a part of a set and as division of a whole number by a whole number.
- **2.1.4.D** Apply place value concepts and base-ten numeration to order and compare larger whole numbers.

Math Grade 4

Pennsylvania Department of Education

**Reporting Category** 

#### ASSESSMENT ANCHOR

M4.A.2 Understand the meanings of operations, use operations and understand how they relate to each other.

#### **ELIGIBLE CONTENT**

- M4.A.2.1 Use operations to solve problems (may include word problems).
   M4.A.2.1.1 Solve problems involving all operations with whole numbers, and/or explain the solution (limit to two-step problems; e.g., multiply then add single digit multipliers and divisors).
  - M4.A.2.1.2 Solve problems involving addition or subtraction with decimals through the tenths or money to the cent and/or explain the solution. Limit to two-step problems.

#### **EXAMPLE ITEMS**

• Add: 238 + 462	• SEA DOG TICKETS Adult\$4.00 Child\$2.00
A. 600 B. 690 ★ C. 700 D. 790	<b>Tuesday Night is Family Night</b> Bring your entire family for \$9.00
<ul> <li>Carl has 3 empty egg cartons and 34 eggs. If each carton holds 12 eggs, how many more eggs are needed to fill all 3 cartons?</li> </ul>	a Sea Dogs baseball game on Tuesday night. How much money will they save by going to the game on Tuesday night rather than to any other regular night
* A.2 B.3 C.4 D.6 <i>(NAEP)</i>	game? A. \$4.00 B. \$4.50 ★ C. \$5.00
• Carla has 12 boxes that each weighs the same amount. What would be a quick way for her to find the total weight of the 12 boxes?	<ul> <li>(Maine State Department of Education)</li> <li>Find the exact value of 568 ÷ 4.</li> </ul>
<ul> <li>A. Add 12 to the weight of one of the boxes</li> <li>B. Subtract 12 from the weight of one of the boxes</li> <li>C. Divide the weight of one of the boxes by 12</li> <li>* D. Multiply the weight of one of the boxes by 12 (NAEP)</li> </ul>	A. 564 <b>*</b> B. 142 C. 140 D. 112 (New Jersey Department of Education)

#### Reference:

- **2.1.4.F** Understand the concepts of addition and subtraction and their **inverse** relationships; understand the concepts of multiplication and division; use the four basic operations to solve problems, including word problems and **equations**.
- **2.2.4.B** Multiply single- and double-digit numbers and divide by single digit numbers, add and subtract fractions with like denominators, and add and subtract decimals.

Pennsylvania Department of Education

**M4.A.3.1** Apply rounding and/or estimation

strategies to solve problems.

### **Reporting Category**

#### ASSESSMENT ANCHOR

M4.A.3 Compute accurately and fluently and make reasonable estimates.

#### **ELIGIBLE CONTENT**

- M4.A.3.1.1 Round whole numbers to the nearest ten, hundred, thousand, ten-thousand or hundred-thousand.
- M4.A.3.1.2 Round amounts of money to the nearest dollar.
- M4.A.3.1.3 Estimate the answer to addition, subtraction and multiplication problems using whole numbers through 6 digits (for multiplication, no more than 2 digits X 1 digit, excluding powers of 10).

#### EXAMPLE ITEMS

- Estimate 39×11. The product is between what numbers?
  - A. 30 and 80
  - B. 100 and 150
- \* C. 300 and 800
  - D. 1000 and 1500

(New Jersey Department of Education)

#### Reference:

- **2.1.4.F** Understand the concepts of addition and subtraction and their **inverse** relationships; understand the concepts of multiplication and division; use the four basic operations to solve problems, including word problems and **equations**.
- **2.2.4.A** Develop **fluency** in the use of basic facts for the four **operations**.
- **2.2.4.D** Estimate sums and differences, products, and quotients, and conclude the **reasonableness** of those estimates.

Pennsylvania Department of Education

Math Grade 4

# **Reporting Category**

#### ASSESSMENT ANCHOR

M4.A.3 Compute accurately and fluently and make reasonable estimates.

		ELIGIBLE CONTENT
M4.A.3.2 Compute using fractions or decimals (written vertically or horizontally - straight computation only).	M4.A.3.2.1	Solve addition or subtraction problems involving decimals through hundredths (decimal numbers must have the same number of places).
	M4.A.3.2.2	Solve addition or subtraction problems with fractions with like denominators (denominators to 10, no simplifying necessary).

#### **EXAMPLE ITEMS**

• Maria's cat eats  $\frac{1}{2}$  can of food a day. How many cans will her cat eat in 1 week?



(Maine State Department of Education)

- **2.1.4.F** Understand the concepts of addition and subtraction and their **inverse** relationships; understand the concepts of multiplication and division; use the four basic operations to solve problems, including word problems and **equations**.
- **2.2.4.D.** Estimate sums and differences, products, and quotients, and conclude the **reasonableness** of those estimates.

Pennsylvania Department of Education

#### ASSESSMENT ANCHOR

M4.B.1 Demonstrate an understanding of measurable attributes of objects and figures, and the units, systems and processes of measurement.		
	ELIGIBLE CONTENT	
<b>M4.B.1.1</b> Determine time and/or calculate elapsed time.	M4.B.1.1.1 Match/construct analog time (a picture of a clock), to the same time written in digital.	
	M4.B.1.1.2 Identify time (analog or digital) as the amount of minutes before and/or after the hour (e.g., 2:50 is the same as 10 minutes before 3:00; quarter past six is the same as 6:15).	ə ər O
	M4.B.1.1.3 Calculate the elapsed time, to the minute, in a given situation (limited to 2 adjacent hours).	C
	M4.B.1.1.4 Determine the beginning or ending time, given the elapsed time (limited to 2 adjacent hours).	

#### **EXAMPLE ITEMS**

- **2.3.4.A** Use concrete objects to demonstrate an understanding of measurement quantities (e.g., length, weight, temperature).
- **2.3.4.C** Calculate elapsed time; use concept of elapsed time to determine start time/end time.
- **2.3.4.D** Perform basic conversions within the same system to the unit immediately above or below the given unit.

Pennsylvania Department of Education

#### Reporting Category

#### ASSESSMENT ANCHOR

#### M4.B.2 Apply appropriate techniques, tools and formulas to determine measurements.

M4.B.2.1 Select and/or use appropriate tools and/or attributes for measuring quantities. M4.B.2.1.1 Use or read a ruler (provided) to measure to the nearest 1/4 inch or centimeter.

**ELIGIBLE CONTENT** 

#### **EXAMPLE ITEMS**

- **2.3.4.B** Select and use appropriate tools and units for measuring quantities (e.g., length, time, weight, temperature).
- **2.3.4.A** Use concrete objects to demonstrate an understanding of measurement quantities (e.g., length, weight, temperature).
- **2.3.4.F** Estimate and verify measurements of length, perimeter, area, weight, capacity, temperature, and time.

Pennsylvania Department of Education

# **ASSESSMENT ANCHOR** M4.B.2 Apply appropriate techniques, tools and formulas to determine measurements. **ELIGIBLE CONTENT** M4.B.2.2.1 Make reasonable estimates of

M4.B.2.2 Estimate measurements of figures.

weights, lengths and capacities of familiar objects (measurements in the same system).

#### **EXAMPLE ITEMS**

- **2.3.4.A** Use concrete objects to demonstrate an understanding of measurement quantities (e.g., length, weight, temperature).
- 2.3.4.F Estimate and verify measurements of length, perimeter, area, weight, capacity, temperature, and time.
- 2.3.4.B Select and use appropriate tools and units for measuring quantities (e.g., length, time, weight, temperature

Pennsylvania Department of Education

#### **M4.B Measurement**

# **Reporting Category**

#### ASSESSMENT ANCHOR



#### ELIGIBLE CONTENT

- M4.C.1.1 Identify/describe the basic properties of geometric figures in two or three dimensions.
- **M4.C.1.1.1** Identify, classify and/or compare twodimensional figures (circle, triangle, square, parallelogram, trapezoid, rhombus, rectangle, pentagon, hexagon, octagon).
- M4.C.1.1.2 Identify or classify three-dimensional figures (cube, sphere, rectangular prism and pyramid).

is correct?

• Alan says that if a figure has four

does not agree. Which of the

sides, it must be a rectangle. Gina

following figures shows that Gina

#### **EXAMPLE ITEMS**

- I am a shape.
  - I have NO flat faces.
  - I have NO corners.
  - I look the same from all directions.

#### What shape am I?



A. B. C. \* D. (NAEP)

(Maine State Department of Education)

#### Reference:

**2.9.4.A** Identify, describe, and define 1-, 2-, and 3-dimensional shapes and their related parts; compare 2-dimensional shapes; compare 3-dimensional shapes.

Pennsylvania Department of Education

#### M4.C Geometry

**Reporting Category** 

#### ASSESSMENT ANCHOR

M4.C.1 Analyze characteristics and properties of two- and three- dimensional geometric shapes and demonstrate understanding of geometric relationships.

M4.C.1.2 Represent and/or use properties or relationships of points, lines, line segments, rays and angles.

ELIGIBLE CONTENT

**M4.C.1.2.1** Identify points, lines, line segments or rays.

M4.C.1.2.2 Identify parallel and perpendicular lines.

#### **EXAMPLE ITEMS**

Which street is parallel to the railroad tracks?



- A. Oak Street
- \* B. Walnut Street
  - C. Maple Street
  - D. Elm Street

(Maine State Department of Education)

#### Reference:

**2.9.4.A** Identify, describe, and define 1-, 2-, and 3-dimensional shapes and their related parts; compare 2-dimensional shapes; compare 3-dimensional shapes.

Pennsylvania Department of Education

Assessment Anchors and Eligible Content Updated August 2010

#### ASSESSMENT ANCHOR

M4.C.2 Identify and/or apply concepts of transformations or symmetry.

M4.C.2.1 Apply the concepts of reflection and symmetry.

#### ELIGIBLE CONTENT

**M4.C.2.1.1** Identify or create figures that have one, two or no lines of symmetry.

#### EXAMPLE ITEMS

• Which figure does NOT have a line of symmetry?









(Maine State Department of Education)

#### Reference:

**2.9.4.B** Identify and draw figures with one or more lines of **symmetry**.

Pennsylvania Department of Education

## M4.C Geometry

# **Reporting Category**

#### ASSESSMENT ANCHOR

M4.C.3 Locate and describe relationships using the coordinate plane.

**M4.C.3.1** Locate points on a simple grid.

#### ELIGIBLE CONTENT

M4.C.3.1.1 Match or plot the ordered pair with the appropriate point (or object) on a simple grid.



• What is the location of point M?





•

(New Jersey Department of Education)

Plot these points and connect them in order. What shape is it? (2,1) (8,1) (8,5) (2,1) 10 9 A. square 8 \*B. triangle 7 C. rectangle 6 D. rhombus 5 4 3 2 1 C 0 2 3 4 5 1 6 7 8 9 10 (Pennsylvania Department of Education)

#### Reference:

i

**2.9.4.C** Identify on a 2-dimensional **coordinate system** the location of points with whole number coordinates; plot in a two-dimensional coordinate system a point represented by an ordered pair of whole numbers

94

### **Reporting Category**

#### ASSESSMENT ANCHOR

M4.D.1 Demonstrate an understanding of patterns, relations and functions.

		ELIGIBLE CONTENT
M4.D.1.1 Recognize, describe, extend, create and/or replicate a variety of patterns.	M4.D.1.1.1	Extend or find a missing element in a numerical or geometric pattern (+, - or x may be used – numerical patterns must be whole numbers).
	M4.D.1.1.2	Identify/describe the rule for a numerical or geometric pattern shown (+, - or x may be used - numerical patterns must be whole numbers).
	M4.D.1.1.3	Create or replicate a numerical or geometric pattern showing 3 repetitions (+, - or x may be used - numerical patterns must be whole numbers or money).

#### **EXAMPLE ITEMS**

• If this pattern continues, what is the next number?

5, 8, 7, 10, 9, 12, 11

- **\*** A. 14
  - B. 13
  - C. 12
  - D. 10

(New Jersey Department of Education)

- Katie made the number pattern shown below.
  - 4, 12, 20, \_\_\_

What number comes next in Katie's pattern?

- A. 49
- B. 32
- \* C. 28
  - D. 24

(Maine State Department of Education)

#### Reference:

**2.8.4.C** Recognize, describe, extend, create, replicate, and make generalizations for a variety of **patterns, sequences**, and relationships verbally and numerically.

Pennsylvania Department of Education

## **Reporting Category**

#### ASSESSMENT ANCHOR

M4.D.1 Demonstrate an understanding of patterns, relations and functions.

**M4.D.1.2** Apply simple function rules.

ELIGIBLE CONTENT
M4.D.1.2.1 Determine the missing elements in a function table (functions may use +, - or x and whole numbers or money).
M4.D.1.2.2 Determine the rule for a function given a table (functions may use +, - or x and whole numbers).

## **EXAMPLE ITEMS**

• What number is missing in the output column of the table below?

Input	Output
4	12
6	18
7	
9	27

A. 20 **\*** B. 21

- C. 22
  - D. 24

(New Jersey Department of Education)

#### Reference:

**2.8.4.D** Use words, tables, and graphs to represent and analyze **functions**.

**2.8.4.C** Recognize, describe, extend, create, replicate, and make generalizations for a variety of **patterns**, **sequences**, and relationships verbally and numerically.

Pennsylvania Department of Education

**Reporting Category** 

#### ASSESSMENT ANCHOR

# M4.D.2 Represent and/or analyze mathematical situations and structures using algebraic symbols, words, tables and graphs.

M4.D.2.1 Use numbers and symbols to model the concepts of expressions and/or equations.

#### ELIGIBLE CONTENT

M4.D.2.1.1 Correlate story situations with expressions or equations (may use numbers and one operation +, - or x; no variables).

#### EXAMPLE ITEMS

- **2.8.4.E** Use concrete objects and combinations of symbols and numbers to create **expressions**, equations, and inequalities that model mathematical situations.
- **2.8.4.F** Describe data represented in **equations, inequalities**, tables, or graphs and/or create a story that matches that data.

Pennsylvania Department of Education

ASSESSMENT ANCHOR M4.D.2 Represent and/or analyze mathematical s symbols, words, tables and graphs.	ituations an	d structures using algebraic
ELIGIBLE CONTENT		
<b>M4.D.2.2</b> Determine the missing number or symbol in a number sentence.	M4.D.2.2.1	Solve for a missing number in an equation (using estimation, guess & check, etc.). May use +, - or single digit x or ÷.
	M4.D.2.2.2	Identify the missing symbol (+, -, x, $\div$ , =, <, >) that makes a number sentence true (single digit x or $\div$ only).
EXAMPLE ITEMS		



- 2.8.4.B Select and use strategies, including concrete objects, to solve number sentences (equations and inequalities) involving whole numbers or unit fractions and explain the method of solution.
- 2.8.4.F Describe data represented in equations, inequalities, tables, or graphs and/or create a story that matches that data.

Pennsylvania Department of Education

**Reporting Category** 

# M4.D Algebraic Concepts

ASSESSMENT ANCHOR M4.D.3 Analyze change in various contexts.

ELIGIBLE CONTENT

Not assessed at Grade 4.

**EXAMPLE ITEMS** 

Pennsylvania Department of Education

**Reporting Category** 

# ASSESSMENT ANCHOR

M4.D.4 Describe or use models to represent quantitative relationships.

ELIGIBLE CONTENT

Not assessed at Grade 4.

**EXAMPLE ITEMS** 

Pennsylvania Department of Education

Reporting Category

# M4.E Data Analysis and Probability

#### ASSESSMENT ANCHOR

- M4.E.1 Formulate questions that can be addressed with data and/or collect, organize, display and analyze data.
- M4.E.1.1 Interpret data shown on tables, charts, line graphs, bar graphs or pictographs.

# M4.E.1.1.1 Describe, interpret and/or answer questions based on data shown in tables, charts, bar graphs or pictographs.

**ELIGIBLE CONTENT** 

#### **EXAMPLE ITEMS**

• The principal challenged Mrs. Brown's class to read 100 books in February. The graph below shows the number of books they read.



How many books did the class read?

- A. 10
- B. 11
- ★ C. 105 D. 110

(Maine State Department of Education)

• The graph below shows the numbers of different kinds of pets owned by students in Mrs. Smith's class.



How many pets in all are owned by the students?

- A. 4 B. 8
- C. 18





Assessment Anchors and Eligible Content Updated August 2010

• The graph below shows the number of people attending the talent show in the last four years.



Which is a true statement about this graph?

- ★ A. The attendance increased two years in a row.
  - B. The attendance in Year 4 doubled the attendance in Year 1.
  - C. The attendance decreased every year.
  - D. The attendance increased every year.

(Maine State Department of Education)

# M4.E Data Analysis and Probability

- **2.6.4.C** Describe and calculate the **mean** and use this quantity to describe the data.
- **2.6.4.D** Analyze data shown in tables, charts, diagrams, and graphs; compare the data from two categories displayed in a graph and compare representations of a set of data in different graphs.
- **2.6.4.E** Determine the **reasonableness** of a statement based on a comparison to data displayed in a graph.
- **2.6.4.B** Organize and display data using tables, pictures, tallies, bar graphs, line graphs, or pictographs.
  - D. 20 (Maine State Department of Education)

Pennsylvania Department of Education

# M4.E Data Analysis and Probability

#### ASSESSMENT ANCHOR

M4.E.1 Formulate questions that can be addressed with data and/or collect, organize, display and analyze data.

M4.E.1.2 Organize or display data using tables, bar graphs, line graphs or pictographs.

#### **ELIGIBLE CONTENT**

- M4.E.1.2.1 Graph data or complete a graph given the data (bar graph or pictograph – grid is provided).
- M4.E.1.2.2 Translate information from one type of display to another (table, chart, bar graph, or pictograph).

#### **EXAMPLE ITEMS**

#### **Favorite Colors**

Red	Ж
Green	
Purple	HT HT
Yellow	
Blue	JHT III

Which chart below shows the data from the tally chart above?

	Fevorite 0	Colori
	Red	5
	Green	2
<b>★</b> A.	Purple	10
	Yellow	7
	Blue	9

	<b>Favorite Colore</b>	
	Red	4
	Green	2
В.	Purple	10
	Yellow	6
	Blue	9

Pennsylvania Department of Education

**Reporting Category** 

# M4.E Data Analysis and Probability

	<b>Fevorite Colors</b>	
	Red	5
	Green	2
C.	Purple	2
	Yellow	7
	Blue	8

# **Favorite Colors**

D.	Red	4
	Green	2
	Purple	8
	Yellow	6
	Blue	8

- **2.6.4.B** Organize and display data using tables, pictures, tallies, bar graphs, line graphs, or pictographs.
- **2.6.4.E** Determine the **reasonableness** of a statement based on a comparison to data displayed in a graph.
- **2.6.4.D** Analyze data shown in tables, charts, diagrams, and graphs; compare the data from two categories displayed in a graph and compare representations of a set of data in different graphs.

Pennsylvania Department of Education

**Reporting Category** 

**ASSESSMENT ANCHOR** 

M4.E.2 Select and/or use appropriate statistical methods to analyze data.

ELIGIBLE CONTENT

Not assessed at Grade 4.

**EXAMPLE ITEMS** 

Pennsylvania Department of Education

# M4.E Data Analysis and Probability

#### ASSESSMENT ANCHOR

M4.E.3 Understand and apply basic concepts of probability or outcomes.

- ELIGIBLE CONTENT
- M4.E.3.1 Predict and/or measure the likelihood of events.

M4.E.3.1.1 Make a prediction based on data or chance (data may be shown in tables, charts, line graphs, bar graphs or pictographs)

#### EXAMPLE ITEMS

• Karla's teacher put 10 marbles in a bag. Without looking into the bag, Karla took a marble out, recorded its color in the chart below, and put it back into the bag. She did this 20 times.

Color	Number of Times	
red	₩	
blue		
green		
yellow	Ш	

If Karla takes one more marble from the bag without looking, what color will it MOST LIKELY be?

- ★ A. red
  - B. blue
  - C. green
  - D. yellow

(Maine State Department of Education)

- A gum ball machine has 7 red gum balls, 4 white gum balls, 9 orange gum balls, and 5 blue gum balls. If Jack puts in a nickel and turns the handle for one gum ball, which color does he have the LEAST chance of getting?
  - A. red
- \* B. white
  - C. orange
  - D. blue

Reference:

(New Hampshire Department of Education)

- **2.7.4.A** Determine the chance of an event occurring by performing **simulations** with concrete devices (e.g., dice, spinner).
- **2.7.4.B** Determine whether different outcomes of the same event are equally likely or not equally likely.
- **2.7.4.D** List or graph the possible results of an experiment.

Assessment Anchors and Eligible Content Updated August 2010

# Reporting Category

Pennsylvania Department of Education

# M4.E Data Analysis and Probability

**Reporting Category** 

#### ASSESSMENT ANCHOR

M4.E.4 Develop and/or evaluate inferences and predictions or draw conclusions based on data or data displays.

**ELIGIBLE CONTENT** 

Not assessed at Grade 4.

**EXAMPLE ITEMS** 

Pennsylvania Department of Education