

**ACTIVITY ONE (SHOW YOUR WORK; SELECTIONS MAY HAVE MORE THAN ONE CORRECT ANSWER)**

**Article:** System upgrade, *Sun., May 26, Business, page 1K*

- What is GPS?
  - giant polar soundboard
  - global positioning system
  - global portfolio system
  - geographical placement satellite
- How many satellites are required to reliably establish a user’s location, without concern for altitude?
  - 1
  - 2
  - 3
  - 4
- How many satellites are required to reliably establish a user’s location, including altitude?
  - 1
  - 2
  - 3
  - 4
- What is the word used to describe the process satellites perform to establish a location?
  - triangulation
  - trio
  - quadration
  - metering
- Which of the following use GPS?
  - military
  - farmers
  - first responders
  - banking

**ACTIVITY TWO**

**Articles:** Bigger game, *Sun., May 26, Denver & The West, page 1B*

- The moose population in Colorado was 12 when moose were transplanted to Colorado high country in 1978. Now the moose population is 2,300. How much has the moose population increased in 36 years?
  - tripled
  - increased by more than 2,280
  - increased by less than 2,500
  - octupled
- Last year 16,500 hunters applied for a license to hunt moose. Two hundred nineteen moose hunting licenses were issued. What percentage of applicants received a license to hunt moose?
  - between one and two percent
  - between nine and ten percent
  - between nineteen and twenty percent
  - more than 20 percent

**ACTIVITY THREE**

**Article:** King Soopers display ad, *Sun., May 26, pages 1-4M*

- Let’s have a picnic! Shop for the following items. How much will the picnic items cost at King Soopers? (You have a card. Take advantage of sale prices!)
    - Two packages of Johnsonville Brats (there are 5 in a package) \_\_\_\_\_
    - Three 28 oz. can of Bush’s original baked beans \_\_\_\_\_
    - Package of hot dog buns for the brats \_\_\_\_\_
    - Iced brownies for dessert \_\_\_\_\_
    - 4 pounds of potato salad, all different types \_\_\_\_\_
    - 2 pounds of strawberries \_\_\_\_\_
- TOTAL PRE-TAX COST: \_\_\_\_\_

May 26, 2013

## STEM: MATHEMATICS and more

Utilizing your rolling 30-day access to the  
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Activities reinforce Colorado Academic Standards using e-editions of the Denver Post.

### ANSWERS

#### ACTIVITY ONE

GPS is global positioning system .

Three satellites are needed to establish a user's location.

Four satellites are needed to establish location and altitude.

Triangulation is the process for three satellites establishing a location.

All of the listed occupations use GPS technology.

#### ACTIVITY TWO

Moose have increased by more than 2,280. The exact number is 2,288.

Between one and two percent of applicants received a license to hunt moose.

#### ACTIVITY THREE

$\$3.99 \times 2 = 7.98$

\$5.00

\$1.99

\$3.99

\$5.00

\$4.00

TOTAL: \$27.96

#### Colorado Academic Standards

##### **Mathematics 1. Number Sense, Properties, and Operations**

Understand the structure and properties of our number system. At their most basic level numbers are abstract symbols that represent real-world quantities

1. The decimal number system to the hundredths place describes place value patterns and relationships that are repeated in large and small numbers and forms the foundation for efficient algorithms.

Understand that equivalence is a foundation of mathematics represented in numbers, shapes, measures, expressions, and equations

2. Different models and representations can be used to compare fractional parts.

Are fluent with basic numerical, symbolic facts and algorithms, and are able to select and use appropriate (mental math, paper and pencil, and technology) methods based on an understanding of their efficiency, precision, and transparency

3. Formulate, represent, and use algorithms to compute with flexibility, accuracy, and efficiency

##### **Mathematics 2. Patterns, Functions, and Algebraic Structures**

Make sound predictions and generalizations based on patterns and relationships that arise from numbers, shapes, symbols, and data

Make claims about relationships among numbers, shapes, symbols, and data and defend those claims by relying on the properties that are the structure of mathematics

1. Number patterns and relationships can be represented by symbols

##### **Mathematics 3. Data Analysis, Statistics, and Probability**

Solve problems and make decisions that depend on understanding, explaining, and quantifying the variability in data

1. Visual displays are used to represent data

##### **Mathematics 4. Shape, Dimension, and Geometric Relationships**

Understand quantity through estimation, precision, order of magnitude, and comparison. The reasonableness of answers relies on the ability to judge appropriateness, compare, estimate, and analyze error

1. Appropriate measurement tools, units, and systems are used to measure different attributes of objects and time

Make claims about relationships among numbers, shapes, symbols, and data and defend those claims by relying on the properties that are the structure of mathematics

2. Geometric figures in the plane and in space are described and analyzed by their attributes