Revised PSSA 2014 - 2015

Academic Standards for Mathematics*

Grades Pre K – High School
April 19, 2012

Pennsylvania Department of Education

*Note: Draft version of the PA Common Core Standards, pending approval by the State Board.

8th Grade No Calculator Questions

1. The distance between Duncan's house and his grandparents' house is 3,400 miles. What is this distance written in scientific notation?

   A 3.4×10^{-2} *used 2 for 2 zeros; move left so used negative*

   B 3.4×10^{-3} *moved left so used nega*

   C 3.4×10^{2} *used 2 for 2 zeros*

   D 3.4×10^{3} *

4. The human body contains about 1×10^{12} bacteria. The human body contains about 4×10^{4} genes. The number of bacteria contained in the human body is how many times as great as the number of genes contained in the human body?

   A. 250   *used 12/4 as exponent instead of 12 – 4*

   B. 4,000   *used 4 as though in numerator and 12/4 instead of 12 – 4*

   C. 25,000,000   *

   D. 400,000,000   *used 4 as though in numerator*

8ᵗʰ Grade Question

12. The violin section makes up $\frac{3}{5}$ of a school orchestra. The equation below is used to determine the total number of musicians (m) in the orchestra.

$$\frac{3}{5}m = 60$$

What is the total number of musicians in the orchestra?

A   36 $60 \times 3/5$

B   100   *

C   195 $(60 + 5) \times 3$

D   297 $60 \times 5 - 3$

17. Quinn needs to buy fabric for a border to sew onto all four edges of a tablecloth. He also needs an extra 0.875 feet of fabric to make a matching potholder. The length of the table cloth is $\frac{4}{3}$ of its width (w), in feet. The total amount of fabric needed (f), in feet, is represented by the equation below.

$$f = 2(w + \tfrac{4}{3}w) + 0.875$$

Quinn needs $\frac{113}{8}$ feet of fabric for the border of the tablecloth and the potholder. What is the width of Quinn's tablecloth?

A. $\frac{39}{14}$ feet   rounded 113/8 – 0.875 to 13 instead of converting 0.875 into a fraction

B. $\frac{159}{40}$ feet   did not distribute 2 to both terms in parentheses

C. $\frac{159}{56}$ feet   *

D. $\frac{159}{32}$ feet   multiplied 2 by the denominator in 4/3 instead of the numerator when distributing

Guess the Grade Level

2008/2009 Released Item Sampler: Find the sum.

$$\frac{4}{7}$$
$$+ \frac{1}{7}$$

A $\frac{3}{14}$

B $\frac{5}{14}$

C $\frac{3}{7}$

D $\frac{5}{7}$

2013/2014 Released Item Sampler: On Jenny's farm 48/100 of ___ ___ ___ 00 of the trees are birch trees. What ___ fraction of the trees on Jenny's ___ birch trees?

4th