6th Grade Math Common Assessment: Chapter 1 Answer Key

Name: _____ Date _____

10 points possible on assessment

6.NS.2

1.) An apple orchard harvested 3,584 apples and separated them evenly into 112 bags. ***Show your work.***

a.) How many apples are in each bag? 32 apples in each bag (1 point)

b.) If 56 apples were placed in each bag instead, how many bags would be left over? They would use 64 bags, which means there would be 48 bags left over. (1 point)

2.) A city ordinance requires that there be a police officer for every 450 residents. If the population of the city is 560,250, what is the minimum number of police officers needed?

Minimum number of officers needed is 1,245 (1 point)

Show your work.

6.EE.1

3. Which of the following expressions is equal to 64? (3 points)

Ⓐ 2^4

Ⓑ 8^2

Ⓒ 6^3

Ⓓ 2^6

Ⓔ 4^3

6.EE.3

Use the **commutative** property to solve. ***Show your work.***

4.) 18 + 6 + 12 + 4 Example: 6+4+18+12 = 40 (1 point)

5.) 8 x 13 x 5 Example: 13 x 5 x 8 = 520 (1 point)

Use the **distributive** property to find each product. ***Show your work.***

6.) 7 x 24 Example: (7 x 20) + (7 x 4) = 168 (1 point)

Use the **associative** property to solve. ***Show your work.***

7.) 12 + 16 + 24 + 9 Example: (24+16) + (9+12) = 61 (1 point)

6th Grade Math Common Assessment: Chapter 2 Answer Key

Name: _____ Date _____

18 points possible on assessment

6.EE.2.a.

1.) The zoo has lions, tigers, and bears. There are ***t*** tigers in the zoo.

a.) Write an expression to show how many lions are in the zoo if there are 3 more lions than tigers? t + 3 lions (1 point)

_____

b.) Write an expression to show how many bears are in the zoo if the number of bears is two times the number of lions?

2(t + 3) bears or 2t + 6 bears is also acceptable (1 point)

_____

6.EE.2.b **(terms in chapter 2 test not addressed in chapter 2, but they are a priority standard for KPBSD and state)**

2.) Use the expression $56xy + 5 - 6x + \frac{y}{20}$, to answer the following questions.

a.) Identify two sums.

$56xy + 5$ and $-6x + \frac{y}{20}$ (2 points)

b.) Identify the terms of the expression.

$56xy$, 5, $-6x$, and $\frac{y}{20}$ (4 points)

c.) Identify a product of two factors. Find the coefficient in the product.

The product is $-6x$ and the coefficient is -6. (2 points)

d.) Identify the quotient.

$\frac{y}{20}$ (1 point)

6.EE.2.c

3.) Evaluate the expression $5y + (14 - 9) \times 2^3$ if $y = 8$.

Show your work.

$5 (8) + (14-9) \times 2^3$

$40 + 5 \times 8$

$40 + 40 = 80$ (2 points)

6.EE.6 and 6.EE.7

Solve each equation.

4.) $6 + p = 10$ _____ $p = 4$ (1 point)

5.) $20 = k - 17$ _____ $k = 37$ (1 point)

6.) $11t = 110$ _____ $t = 10$ (1 point)

7.) $z \div 13 = 4$ _____ $z = 52$ (1 point)

6.EE.2 and 6. EE.6

8.) On the first day Corey did 35 sit-ups. On the second day he did 70 sit-ups, and on the third day he did 105 sit-ups.

If Corey continues this pattern, how many sit-ups will he do in ***d*** days?
_____ 35d 35 x d is also acceptable (1 point)

Day	Number of Sit-ups
1	35
2	70
3	105
d	?

6th Grade Math Common Assessment: Chapter 3 Answer Key

Name: _____ Date _____

10 points possible on assessment

EE.7 & NS.3

1.) Adam is saving money to buy a computer. He saves ***s*** dollars each week. After 7 weeks, he has $173.25 saved.

a.) Write an equation that models the situation.

7s= $173.25 (1 point)

b.) How much does Adam save each week? $24.75 (1 point)
Show your work.

c.) The computer Adam wants to buy is $321.75. How many more weeks does he have to save to buy the computer? Write an equation to model this situation and solve. ***Show your work.***

Equation: Adam needs to save $321.75-$173.25 = $148.50 more to buy the computer. Let w be the additional number of weeks he must work.
$24.75w = $148.50 (1 point)

How many more weeks does Adam have to save to buy the computer?
6 Weeks (1 point)

6.NS.3

2.) Evaluate.

6.41 + 5.8 + 11.01 = 23.22 (1 point)

3.) Evaluate.

6.28 – s s = 3.4

6.28 - 3.4 = 2.88 (1 point)

4.) Write 65.78 in expanded notation and in words.

a.) Expanded Notation: $(6 \times 10)+(5 \times 1)+(7 \times \frac{1}{10})+(8 \times \frac{1}{100})$ (1 point)

b.) Word Form: sixty-five and seventy-eight hundredths (1 point)

5.) Order decimals from least to greatest.

11.12, 10.99, 11.09

10.99, 11.09, 11.12 (1 point)

6.) Estimate.

98.567 ÷ 4.93 =

100 ÷ 5 = 20 (1 point)

6th Grade Math Common Assessment: Chapter 4 Answer Key

Name: _____ Date _____

15 points possible for assessment

6.NS.4

1.) Write the prime factorization of 48. $2^4 \times 3$ (1 point)

Show work

2.) Find the greatest common factor of 12, 18, and 60. GCF = 6 (1 point)

Show work.

3.) Use the distributive property to write an equivalent expression to 5(x + 3).

5x +15 (1 point)

4.) Consider the sum 36 + 45. Answers may vary.

a.) Use the distributive property to rewrite the sum as the product of a whole number other than 1 and a sum of two whole numbers.

36 + 45 = 3 (12 + 15) (1 point)

b.) Write the sum as the product of a whole number different from the one you chose in part a and a sum of two whole numbers.

36 + 45 = 9 (4 + 5) (1 point)

c.) Can this be done in more than two ways? Explain.

These numbers cannot be done more than two ways because 3 and 9 are the only common factors. (2 points)

(Teacher note: Problems 5-9 are not priority standards but students need to have a good grasp of these concepts.)

5.) Write decimal as a fraction or mixed number. Simplify your answer.

a.) 0.49 $\frac{49}{100}$ (1 point)

b.) 1.80 $1\frac{4}{5}$ (1 point)

6.) Write as a decimal. Round to the nearest hundredth.

a.) $^4/_5$ .8 (1 point)

b.) $^7/_9$ .78 (1 point)

7.) Find two equivalent fractions of $^7/_8$.

Answers may vary. $\frac{14}{16}$ $\frac{21}{24}$ (1 point)

8.) Write as a mixed number or improper fraction. Solve in simplest form.

a.) $2\frac{7}{9}$ $\frac{25}{9}$ (1 point)

b.) $\frac{11}{3}$ $3\frac{2}{3}$ (1 point)

9.) Order from least to greatest.

$\frac{3}{8}, \frac{5}{12}, \frac{1}{4}$ $\frac{1}{4}, \frac{3}{8}, \frac{5}{12}$, (1 point)

6th Grade Math Common Assessment: Chapter 5 Answer Key

Name: _____ Date _____

17 points possible for assessment

6.NS.4

1.) Find the least common multiple of the following sets of numbers:

a.) LCM of 8 and 12 LCM = 24 (1 point)

b.) LCM of 6, 18, and 4 LCM = 36 (1 point)

2.) Charlie and Dasha are roommates, and they have a dog. If neither of them is home, they hire someone to watch the dog. Charlie must go on business trips every 6 months, while Dasha must go on business trips every 9 months.

<u>If they both just got back from business trips, how many months will it be before they need to hire someone to look after the dog again?</u> Explain your answer.

Explanations may vary:
The LCM of 6 and 9 is 18. This means that Charlie and Dasha will both be traveling on business trips in 18 months, and so they will need to hire someone at that point to watch their dogs. (1 point for correct answer, 2 points for explanation)

6.NS.1

Solve in simplest form.

3.) $\frac{1}{3} + \frac{1}{9} = \frac{4}{9}$ (1 point)

4.) $2\frac{3}{4} - \frac{7}{8} = \frac{15}{8} = 1\frac{7}{8}$ (1 point)

5.) $5\frac{2}{3} \times \frac{5}{7} = \frac{85}{21} = 4\frac{1}{21}$ (1 point)

6.) $2\frac{1}{4} \div 6 = \frac{9}{24} = \frac{3}{8}$ (1 point)

Solve for y.

7.) $3y = \frac{2}{3}$ y =_____

$\frac{2}{3} \div 3 = \frac{2}{3} \times \frac{1}{3} = \frac{2}{9}$ (1 point)

8.) $\frac{4}{5}y = 12$ y =_____

$12 \div \frac{4}{5} = \frac{12}{1} \times \frac{5}{4} = \frac{60}{4} = \frac{30}{2} = 15$ (1 point)

Solve.

9.) How many $\frac{1}{2}$ cup servings are there in $\frac{7}{8}$ cup of peanut butter?

Show your work.

$\frac{7}{8} \div \frac{1}{2} = \frac{7}{8} \times \frac{2}{1} = \frac{14}{8} = 1\frac{3}{4}$ (1 point)

10.) Pat has a $5\frac{2}{3}$ pound mixture of pecans and cashews. The mix includes $2\frac{3}{4}$ pounds of cashews. How many pounds are pecans?

Show your work.

$5\frac{2}{3} - 2\frac{3}{4} = 5\frac{8}{12} - 2\frac{9}{12} = 4\frac{20}{12} - 2\frac{9}{12} = 2\frac{11}{12}$ (1 point)

11.) *Juan was presented with the following problem on a math test:*

"Divide $\frac{3}{4}$ by $\frac{5}{7}$. Show your work." His work is shown below. What was Juan's error? $\frac{5}{7} \div \frac{3}{4} = \frac{5}{7} \square \frac{4}{3} = \frac{20}{21}$

<u>Correct his work and state the correct quotient</u>. (4 points)

Juan set up the problem incorrectly as $\frac{5}{7} \div \frac{3}{4}$

In the problem, $\frac{3}{4}$ is the dividend and $\frac{5}{7}$ is the divisor.

The correct work is $\frac{3}{4} \div \frac{5}{7} = \frac{3}{4} \times \frac{7}{5} = \frac{21}{20}$

The correct quotient is $\frac{21}{20}$ or simplified quotient would be $1\frac{1}{20}$