PSSA, Grade 7 Math

Dominic Does Homework

Handscoring
Anchor Set

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

> **A.** What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division **without** the aid of a calculator.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

Grade 7 Math
Dominic Does Homework

Assessment Anchor this item will be reported under:
   M07.A-N.1 Apply and extend previous understandings of operations to add, subtract, multiply, and divide rational numbers.

Specific Anchor Descriptor addressed by this item:
   M07.A-N.1.1 Solve real-world and mathematical problems involving the four operations with rational numbers.

Scoring Guide:

Score	In this item, the student –
4	Demonstrates a thorough understanding of performing the four operations with rational numbers by correctly solving problems and clearly explaining procedures.
3	Demonstrates a general understanding of performing the four operations with rational numbers by correctly solving problems and clearly explaining procedures with only minor errors or omissions.
2	Demonstrates a partial understanding of performing the four operations with rational numbers by correctly performing a significant portion of the required task.
1	Demonstrates minimal understanding of performing the four operations with rational numbers.
0	The response has no correct answer and insufficient evidence to demonstrate any understanding of the mathematical concepts and procedures as required by the task. Response may show only information copied from the question.
Non-scorables	B – Blank, entirely erased or written refusal to respond F – Foreign Language K – Off-task U – Unreadable

Top Scoring Student Response And Training Notes:

Score	Description
4	Student earns 4 points.
3	Student earns 3.0 – 3.5 points.
2	Student earns 2.0 – 2.5 points.
1	Student earns 0.5 - 1.5 points. OR Student demonstrates minimal understanding of performing the four operations with rational numbers.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.

A.

What?	Why?
$0.1\overline{6}$ **OR** $0.166\ldots$ **OR** **EQUIVALENT**	**Sample Work:** $\begin{array}{r} 0.1666 \\ 6\overline{)1.0000} \\ \underline{-6}\downarrow \\ 40 \\ \underline{-36}\downarrow \\ 40 \\ \underline{-36}\downarrow \\ 40 \\ \underline{-36} \\ 4 \end{array}$ **OR** **Sample Explanation:** When dividing 1 by 6, I have to keep dividing 40 by 6, which leaves a remainder of 4. Then, when I bring down the next 0, I have to divide 40 by 6 again. I can see that I would have to keep dividing 40 by 6 forever. **OR EQUIVALENT**

(2 score points)

      1 point for correct answer

      1 point for complete support

          OR ½ point for correct but incomplete support

B.

What?	Why?
	Sample Explanations: The answer must have a denominator that is a multiple of 6 and 8. **OR** $\dfrac{2}{14} < \dfrac{1}{6}$ and $\dfrac{1}{6} + \dfrac{1}{8} > \dfrac{1}{6}$ since $\dfrac{1}{8}$ is a positive number. However, $\dfrac{2}{14}$ cannot be both less than and greater than $\dfrac{1}{6}$, so it cannot be the correct answer. **OR EQUIVALENT**

(1 score point)

      1 point for complete explanation

          OR ½ point for correct but incomplete explanation

C.

What?	Why?
$\dfrac{7}{24}$	

(1 score point)

      1 point for correct answer

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division **without** the aid of a calculator.

The decimal representation is 0.166.
To get the decimal representation I divided the numerator by the denomenator.

$$
\begin{array}{r}
.16\overline{6} \\
6\overline{)1000} \\
-6 \\
\hline
40 \\
-36 \\
\hline
40 \\
-36 \\
\hline
4
\end{array}
$$

---

4   A. 2 points – correct answer and complete support (shows long division).
     B. 1 point – complete explanation.
     C. 1 point – correct answer.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

> I can tell Dominic is incorrect because 14 is not a common multiple of 6 and 8.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

> $\frac{7}{24}$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$6 \overline{)\, 10}$$

0.1666...

6
40
36
40
36
4

The decimal continues when you do the division

The decimal form of $\frac{1}{6}$ is 0.166666...

4
A. 2 points – correct answer and complete support.
B. 1 point – complete explanation.
C. 1 point – correct answer.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

Dominic added across instead of finding LCD and doing it correctly

$$\frac{1}{6} + \frac{1}{8} = \frac{2}{14}$$

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

LCD

$\overset{\downarrow}{24}$

6 12 18 (24)

8 16 (24)

$\frac{4}{24}$

$1 \times 4 = 4$
$6 \times 4 = 24$

$\frac{3}{24} = \frac{7}{24}$

$8 \times 3 = 24$
$1 \times 3 = 3$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator. You can tell that the decimal will repeat because after adding a 0 to the 1 to be able to divide by 6, the closest you can come to 40, the result of 10-6, is 36. Then, this will just continue to repeat.

$$6\overline{)10} \quad 0.\overline{166}$$
$$-6$$
$$40$$
$$-36$$

3   A. 2 points – correct answer and complete support.

B. 0.5 point – correct but incomplete explanation (24 is not the *greatest* common denominator, but the concept is correct).

C. 1 point – correct answer.

73. *Continued.* Please refer to the previous page for task explanation.
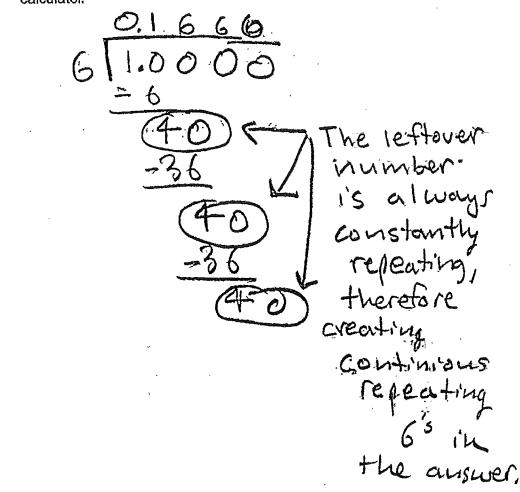

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

The greatest common denominator of 8 and 6 is 24, not 14. Therefore his denominator makes his fraction incorrect.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{6} + \frac{1}{8} = \frac{1 \cdot 4}{6 \cdot 4} \quad \frac{4}{24} \qquad \frac{1 \times 3}{8 \times 3} \quad \frac{3}{24}$$

$$\frac{4}{24} + \frac{3}{24} = \boxed{\frac{7}{24}}$$

The solution is $\frac{7}{24}$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125.$

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$0.1 \; 6 \; 6 \; 6$$
$$6 \overline{) 1.0 \; 0 \; 0 \; 0}$$
$$= 6$$
$$(4 \; 0)$$
$$-36$$
$$(4 \; 0)$$
$$-36$$
$$(4 \; 0)$$

The leftover number is always constantly repeating, therefore creating continuous repeating 6's in the answer.

3   A. 1 point – no credit for answer (missing notation for repeating decimal); complete support.
   B. 1 point – complete explanation.
   C. 1 point – correct answer.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

He had skipped the step of converting both fractions' denominators into common denominators, and had just added across the numerator and denominator.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1 \times 4}{6 \times 4} = \frac{4}{24}$$
$$+ \frac{1 \times 3}{8 \times 3} = \frac{3}{24}$$
$$\overline{\phantom{+ \frac{1 \times 3}{8 \times 3} = } \frac{7}{24}}$$

$$\boxed{\frac{7}{24}}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$0.1\overline{666}$$

$$6 \overline{)1.0}$$
$$-6$$
$$40$$
$$-36$$
$$40$$
$$-36$$
$$40$$

You divide 1 by 6 to get a decimal answer of 0.1$\overline{67}$

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2   A. 1 point – no credit for answer (0.167); complete support.
    B. 0.5 point – correct but incomplete explanation (LCM is not 48).
    C. 1 point – correct answer.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

Dominic would first have to find a LCM which is lowest common denominator. Otherwise, your answer is wrong because you can not add 2 denominators that don't match. The LCM is 48.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$LCM - 48$

$$\frac{1^{\times 8}}{6_{\times 8}} + \frac{1^{\times 6}}{8_{\times 6}} = \qquad \frac{8}{48} + \frac{6}{48} = \frac{14}{48} = \boxed{\frac{7}{24}}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine, that it repeats when doing long division without the aid of a calculator.

$$\frac{1}{6} \div$$

$$6\overline{)1.000}$$
$$\quad\underline{6}$$
$$\quad 40$$
$$\quad\underline{36}$$
$$\quad\quad 40$$
$$\quad\quad 36$$

quotient: $0.1\overline{666}$

2   A. 1 point – no credit for answer (notation for repeating decimal is incorrect); complete support.
   B. 0 points – incorrect explanation.
   C. 1 point – correct answer.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

Because 24 is not divisible by 7

$$\frac{1}{6} + \frac{1}{8} = \frac{7}{24}$$

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{6} + \frac{1}{8} = \frac{7}{24}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

when you divide 6 by the decimal you think is equivilent to ⅙ you should get 36 (6*6).

1   A. 0 points – incorrect answer and incorrect support.

B. 0.5 point – correct but incomplete explanation (*"denominators that are the same"* is correct, but if *"numerators"* are also explained, it must be clear that this does not mean "1 + 1").

C. 1 point – correct answer.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

Dominic is incorect Because First you must find the denominators that are the same for each. So that when you add you add the numerator and the denominators stay the same.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$\frac{1}{6} \cdot \frac{1}{4} = 24$ $\frac{1}{8} \cdot 3 = 24$ $\frac{4}{24} + \frac{3}{24} = \frac{7}{24}$

$\frac{4}{24}$ $\frac{3}{24}$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$\frac{1}{6} \leftarrow \text{:divide}$$

$$1 \div 6 = 0.\overline{16}$$

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1   A. 0.5 point – incorrect answer; correct but incomplete support (1 ÷ 6).
     B. 0 points – incorrect explanation.
     C. 0 points – incorrect answer.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

Dominic could be wrong because maybe he placed a number wrong or put his decimal in the wrong spot.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{6} \times \frac{1}{8} = \boxed{\frac{1}{48}}$$

Lowest form

$\frac{1}{48}$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

well i divide 0.125 by 2 because
I didnt know how to turn a
fraction into a decimal and i got
0.0625

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0   A. 0 points – incorrect answer and incorrect support.
    B. 0 points – incorrect explanation.
    C. 0 points – incorrect answer.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

$$\frac{1}{6 \times 8} \times \frac{1}{8 \times 6} = \frac{1}{48}$$

because $8 \times 6 / 6 \times 8$ is 48

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{48}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division **without** the aid of a calculator.

> The problem will repeat itself because it is dealing with numbers that can't go into eachother. Therefore it will repeat itself.

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0   A. 0 points – incorrect answer and incorrect support.
    B. 0 points – incorrect explanation.
    C. 0 points – incorrect answer.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

> Dominic is incorrect because the fraction isn't put into lowest terms.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

> The sum of $1/6$ & $1/8$ is $1/24$.

PSSA, Grade 7 Math

Dominic Does Homework

Handscoring
Training Set 1

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$
\begin{array}{r}
.1\,6\overline{6} \\
6\,\overline{)1.0000} \\
-6 \\
\hline
4\,0 \\
-36 \\
\hline
40 \\
-36 \\
\hline
4\,0
\end{array}
$$

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

I could determine that Dominic is wrong because he just added the fractions. What he should have did was make the denominators the same by finding Least Common Multiple for the denominators instead.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.
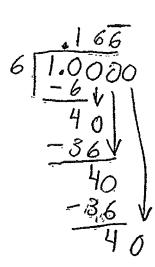
The sum of $\frac{1}{6}$ and $\frac{1}{8}$ would be $\frac{7}{24}$.

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division **without** the aid of a calculator.

$\frac{1}{6} =$

```
        .16666 66666
    6 | 10
       - 6
        40
        36
        40
        36
        40
        36
        40
       -36
        40
       - 36
        40
       -36
        40
       -36
        40
       -36
        40
       -36
        40
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73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

You could determine that Dominic is incorrect by looking at the fractions. You can compare the sum with the numbers being added. The fraction $\frac{2}{14}$ is less that both $\frac{1}{6}$ and $\frac{1}{8}$. The fractions $\frac{1}{6}$ and $\frac{1}{8}$ cant make a number less that them when added together because they are both positives.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{6} = \frac{4}{24}$$

$$\frac{1}{8} = \frac{3}{24}$$

$$\frac{4}{24} + \frac{3}{24} = \boxed{\frac{7}{24}}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

> A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.
>
> The decimal representation for 1/6 is .16666 while doing long division when trying to get the decimal, you're keep getting the same number, which explains "repeating" decimal.

73.   *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

To add fractions correctly they Must have the Same denominator, You have to find the greatest common factor for the denominators to be the same.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{6} + \frac{1}{8}$$

$$\frac{1}{8} \times \frac{3}{3} = \frac{3}{24}$$

$$\frac{1}{6} \times \frac{4}{4} = \frac{4}{24}$$

$$\frac{4}{24} + \frac{3}{24} \left(\frac{7}{24}\right)$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$
\begin{array}{r}
6\,7 \\
1\,)\overline{6\,0} \\
-\,1 \\
\hline
-\,7\,0 \\
7\,0 \\
\hline
0
\end{array}
$$

answer – (0.67)

I did long divison for one and six.

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73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

Dominic added the top and the bottom therefor he got $\frac{2}{14}$. Domnic has to multiple the two. He can't check by doing this

$$\frac{1 \times 1}{6 \times 8} = \frac{1}{48}$$

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{6} \times \frac{1}{8} = \frac{1}{48}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$\frac{1}{8} = 0.125 = 1 \div 8 = 0.125$

$1 \div 6 = 0.1\overline{6} = \frac{1}{6} = 0.1\overline{6}$

I divided the numerator (1) by the denominator (6) and got my answer. (0.1$\overline{6}$).

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

You could determine that Dominic is incorrect, by adding $\frac{1}{6} + \frac{1}{8}$.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$\frac{1}{6} + \frac{1}{8} = 0.2916666 \times 100 = 29.1\overline{6}$

I added $\frac{1}{6}$ by $\frac{1}{8}$ and got 0.2916666 then I multiplied it by 100 and got 29.16

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$0.16666$$
$$6\overline{)1.000000}$$

As you can see after the first time I subtracted 40 - 36 = 4 which add 0 = 40 and then you repete this over and over

0.16666

Is the decimal form of $\frac{1}{6}$

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73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

Well when you add decimals you have to find a common detomonator and in this case the fractions will change to $\frac{8}{48} + \frac{6}{48}$ then you add

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C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1^{\times 8}}{6^{\times 8}} + \frac{1^{\times 6}}{8^{\times 6}} = \frac{8}{48} + \frac{6}{48} = \frac{14}{48}$$

$$\begin{array}{r} 14 \\ \times\ 2 \\ \hline 28 \end{array}$$

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73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

The decimal representation for $\frac{1}{6}$ is 0.16666667. I can tell that it repeats because when you try to divide 100 by 6, you get a repeating decimal. But when you divide 100 by 8, you do not get a repeating decimal. Dividing 100 by different numbers is a test of whether or not your fraction will convert into a repeating decimal

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73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

I can determine that Dominic is incorrect without computing the sum because 14 is not a common multiple of 6 and 8, so he is not doing the right calculations.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$\frac{7}{24}$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$6)\overline{1.000000} = 0.16666$$

$$\frac{1}{6} = 0.1\overline{6}$$

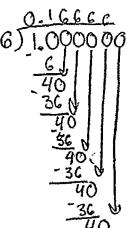**73.** *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

I can determine that Dominic is incorrect without actually answering the problem by just looking at it. For Dominic to get an answer of $\frac{2}{14}$ he would have added the numerators together to get 2 and the denominators together to get 14. When you add fractions together you have to change the denominators so that they are the same. If Dominic had done that he would not have gotten $\frac{2}{14}$. That is why Dominic is incorrect.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{6} - \frac{4}{24}$$
$$\frac{1}{8} - \frac{3}{24}$$
$$\overline{\frac{7}{24}}$$

$\boxed{\dfrac{7}{24}}$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$\frac{1}{6} = .166666667$$

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73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

You could determine that Dominic is incorrect because if she did not use a calculator you can see that she just added straight across and that is not how you find the sum of (2) two fractions.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{8} + \frac{1}{6} = \frac{7}{24}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division **without** the aid of a calculator.

$$.1666$$
$$6\overline{)1.0000}$$
$$\underline{6}$$
$$40$$
$$\underline{36}$$
$$40$$
$$\underline{36}$$
$$40$$
$$36$$

You could determine this by dividing 1 by 6 because you always divide the numerator by the denominator. You will see that you end up with 40 and 6 goes into 40 6 times but you always get 4 back so it would go on forever.

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73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

You could tell he was incorrect be cause he just added the denominator you must finda common denominator.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{4}{48} \quad \frac{4 \times 1}{4 \times 6} + \frac{1 \times 6}{8 \times 6} \quad \frac{6}{48}$$

$$\frac{4}{48} + \frac{6}{48} \quad \frac{14}{48} \div \frac{2}{2} \quad \boxed{\frac{7}{24}}$$

Subject: **Math**   Item: **Dominic Does Homework**   Grade 7

Name   _____

Number	Score	Notes
T1-1		
T1-2		
T1-3		
T1-4		
T1-5		
T1-6		
T1-7		
T1-8		
T1-9		
T1-10		

PSSA, Grade 7 Math

Dominic Does Homework

Handscoring
Training Set 2

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

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73. *Continued:* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

you could determine this because you can tell he added the numbers without finding a common denominator.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1 \cdot 8}{6 \cdot 8} \quad \frac{8}{48} \qquad \frac{1 \cdot 6}{8 \cdot 6} \quad \frac{6}{48}$$

$$\frac{8}{48} + \frac{6}{48} = \frac{14 \div 2}{48 \div 2} \quad \boxed{\frac{7}{24}}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8}$ = 0.125.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$\frac{1}{6} \cdot 0.100 \div 0.167$$

To get $\frac{1}{6}$ as a decimal, first you have to put $\frac{1}{6}$ down then figure out what symbol to use. I used multiplication. Then you multiply $\frac{1}{6} \cdot 0.100$ and get 0.167.

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73. *Continued:* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

$$\frac{1}{6} + \frac{1}{8} = \frac{2 \div 2}{14 \div 2} = \frac{1}{7}$$

Dominic's answer is incorrect because $\frac{1}{6} + \frac{1}{8}$ does equal to $\frac{2}{14}$ but he did not simplify. The correct answer is $\frac{1}{6} + \frac{1}{8} = \frac{2 \div 2}{14 \div 2} = \frac{1}{7}$.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

The sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{1}{7}$ because $\frac{1}{6} + \frac{1}{8} = \frac{2}{14}$ then you simplify $\frac{2}{14}$ by 2 and get $\frac{1}{7}$.

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73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

You can do $6\overline{)1}$ and then add a zero to one and place a decimal point above, $6\overline{)10}$ and now divide $6\overline{)1000}$ Now we can tell it will go on forever so I write it like this $.1\overline{6}$

$$\begin{array}{r} .166 \\ 6\overline{)1000} \\ \underline{-6} \\ 40 \\ \underline{-36} \\ 40 \\ \underline{-36} \\ 4 \end{array}$$

The decimal representation for $\frac{1}{6}$ is $.1\overline{6}$

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73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

You cold determine that Dominic is incorrect already because you can't add without finding a least common denominator which is 24 but he got 14 which is wrong.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{6}\left(\frac{4}{24}\right)$$
$$+ \frac{1}{8}\left(\frac{3}{24}\right)$$
$$\overline{\left(\frac{7}{24}\right)}$$

---

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$\frac{1}{6} = 1 \div 6 = 0.\overline{16}$$

A fraction is a division problem. I did 1 divided by 6 and got 0.16 repeating.

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73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

Dominic just added the numerators and the denominators. To find the sum of the fractions, you cannot add the numerators and the denominators.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{6} + \frac{1}{8} = \frac{7}{24}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$1\overline{)6}^{.16\overline{6}}$$

73.   *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

he is incorrect with $\frac{2}{14}$ you had to add both to get the some of 7/ 14.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

.166 + .145 = .285

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division **without** the aid of a calculator.

$$\frac{1}{6}$$

You would take 1÷6. Which is
0.1$\overline{66}$.

You keep getting 4 over and over so you continue to add a zero and it always comes out to ⁻40.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

Dominic added straight across.

$$\frac{1}{6} + \frac{1}{8} = \frac{2}{14}$$

sum - subtraction

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{6} - \frac{1}{8} = \boxed{\frac{1}{24}}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

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73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

You could determine this because the least common denominator of 6 and 8 is not 14. It is 24.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1\times4}{6\times4} + \frac{1\times3}{8\times3} = \frac{4}{24} + \frac{3}{24} = \frac{7}{24}$$

---

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$
\begin{array}{r}
0.16\overline{66} \\
6\overline{\smash{\big)}\,1.0000} \\
\underline{-6} \\
340 \\
\underline{-36} \\
40 \\
\underline{-36} \\
40 \\
\underline{-36} \\
4
\end{array}
$$

---

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

He is incorrect because all he did was add the denominators and then add the numerators.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$\frac{7}{24}$ is the sum of $\frac{1}{6}$ and $\frac{1}{8}$.

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

73.   *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

When you add fractions you have to find the least common denominator. Then, you just multiply the numerators by whatever you did to get the denominator. Then you just add the numerators.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1 \cdot 4}{6 \cdot 4} \quad \frac{1 \cdot 5}{8 \cdot 3} \quad \frac{4}{24} \quad \frac{3}{24} \boxed{\frac{7}{24}}$$

24

$$\boxed{7/24}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$ he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

```
    0.166666
6 | 1.000000
   -0
    9 10
    -6
    34 0 0
    -36
     40
    -36
    34 010
    -36
    34 0 0
    -36
    34 0 10
     36
     4
```

I can tell because 40 is not divisible by 6 so you will never find a whole number that goes into 40, 6 times. This causes you take add on zeros which keeps the # repeating

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

It could because 1/6 is larger than 2/14 and by adding 1/8 to 1/6 is would be even larger than before

$$\frac{2}{14} = \frac{1}{7} = .14 \quad , \quad 1/6 = 1/6 = .16 \quad 1/8 = .12$$

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1 \times 4}{6 \times 4} + \frac{1 \times 3}{8 \times 3} =$$

$$\frac{4}{24} + \frac{3}{24} = \left(\frac{7}{24} \right)$$

Subject: **Math**   Item: **Dominic Does Homework**   Grade 7

Name   _____

Number	Score	Notes
T2-1		
T2-2		
T2-3		
T2-4		
T2-5		
T2-6		
T2-7		
T2-8		
T2-9		
T2-10		

PSSA, Grade 7 Math

Dominic Does Homework

Handscoring
Practice Set[*]

*Responses in this set do not have true scores. Apply scores based on scoring criteria.

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$6 \overline{\smash{)}1.00\,00\,00}$$

$\frac{1}{6} = 0.1\overline{6}$
you can tell that it repeats indefinitly because your always going do subtract 36 from 40 and get 4, then bring down the 0.and get 40 and reapeat it all over again,

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73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

i can tell it is incorrect because neither 6 or 8 is a multiple of 14.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

1/6 = 4/24
+ 1/8 = 3/24
7/24

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division **without** the aid of a calculator.

$$\frac{1}{8} = 0.125$$

$$6 \overline{)1.00\,0\,0}$$

0.166

$$\frac{1}{6} = 0.1666$$

40
36
40
36
40 Repeating

---

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

well Its incorrect because I added it up and got a different answer.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{6} + \frac{1}{8} = \frac{7}{24}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division **without** the aid of a calculator.

$$\frac{1}{6} = .6 \geq 6\%$$

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.
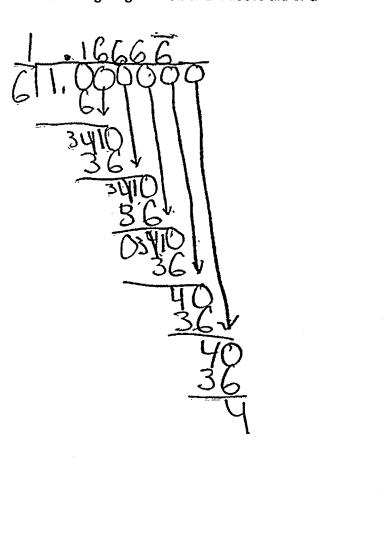
B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

You can determine that Dominic is incorrect because his number is not simplified.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{7}{24}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

You would do 1÷6 and you would get 0.166666667.
The way you can tell if you get the same number,

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73.   *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B.   Explain how you could determine that Dominic is incorrect without actually computing the sum.

The decimals would have had a bigger number,

C.   What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

It would be $\frac{7}{24}$.

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125.$

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division **without** the aid of a calculator.

$$
\require{enclose}
\begin{array}{r}
.1666 \\[-2pt]
6\,\enclose{longdiv}{1.0000} \\
\end{array}
$$

---

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

I know he is incorrect because when adding fractions you have to find a like denominator.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{4}{24} + \frac{3}{24} = \boxed{\frac{7}{24}}$$

---

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125.$

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

$$\frac{1}{6} = 6\overline{)1.06\ 0}$$

0.16̄6

    - 6↓

       40
     - 36
    ---------   Repeats
       40
     - 36

       40

The decimal for $\frac{1}{6}$ is 0.16̄6, If the number keeps showing up like the number 40 then you can stop at the thousandth place and put the line on the top of the number that's on the thousandth place to repersent it's a repeating number.

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

Dominic is wrong because if you try to check your work it would be a totally different answer. If your ever going to add or subtract fractions you have to make sure that the denonator is the same as the other one because you can't just add denonators like that. It's not in equal pieces.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1}{6} + \frac{1}{8}$$

$$\frac{4}{24} + \frac{3}{24} = \boxed{\frac{7}{24}}$$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator. $0.1\overline{6}$

73. *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum. *I can tell he is incorrect because*

I see he added the fractions instead of multiplying them.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$\frac{1}{48}$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division **without** the aid of a calculator.

the decimal is 1.6.

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73   *Continued.* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

I think the sum is incorrect sum is $\frac{1}{6} + \frac{1}{8} = \frac{2}{14}$

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

the lowest term is $\frac{1}{6} + \frac{1}{8} = \frac{2}{14}$

73. Dominic prefers to work with decimals instead of fractions. For one homework problem involving $\frac{1}{6}$ and $\frac{1}{8}$, he decides to turn both fractions into decimals before continuing. He discovers that $\frac{1}{8} = 0.125$.

A. What is the decimal representation for $\frac{1}{6}$? Show or explain how you could determine that it repeats when doing long division without the aid of a calculator.

The decimal representation for $\frac{1}{6}$ is 0.1$\overline{67}$. When doing the division problem, you'll notice that the numbers keep coming up over and over again.

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73. *Continued:* Please refer to the previous page for task explanation.

Dominic incorrectly decides that the sum of $\frac{1}{6}$ and $\frac{1}{8}$ is $\frac{2}{14}$.

B. Explain how you could determine that Dominic is incorrect without actually computing the sum.

The number foorteen is not evenly divisible by six or eight.

C. What is the sum of $\frac{1}{6}$ and $\frac{1}{8}$? Give your answer in the form of a fraction in lowest terms.

$$\frac{1 \times 4}{6 \times 4} \quad \frac{4}{24}$$

$$+$$

$$\frac{1}{8} \times 3 \quad \frac{3}{24}$$

$$\frac{7}{24}$$

$$\boxed{\frac{7}{24}}$$

Practice Set*

Subject: **Math**   Item: **Dominic Does Homework**   Grade 7

Name _____

Number	Score	Consensus	Annotation
P-1			
P-2			
P-3			
P-4			
P-5			
P-6			
P-7			
P-8			
P-9			
P-10			

*Responses in this set do not have true scores. Apply scores based on scoring criteria.

PSSA and Keystone Exams
Fall 2015
Item Writing and Handscoring Training Workshops

PSSA, Grade 7 Math

Dominic Does Homework

Handscoring
Training Sets 1 and 2
True Scores/Annotations

Page	Score	Description
1	4	A. 2 points – correct answer and complete support. B. 1 point – complete explanation. C. 1 point – correct answer.
2	2	A. 1 point – no credit for answer (missing notation for repeating decimal); complete support. B. 0.5 point – correct but incomplete explanation (the concept is correct, but 2/14 is not less than *both* 1/6 and 1/8; just less than 1/6). C. 1 point – correct answer.
3	1	A. 0 points- incorrect answer and insufficient support for any credit. B. 0.5 point – correct but incomplete explanation (*"same denominator"* is correct, but *"greatest common factor"* is incorrect). C. 1 point – correct answer.
4	0	A. 0 points – incorrect answer and support. B. 0 points – incorrect explanation. C. 0 points – incorrect answer.
5	1	A. 1.5 points – correct answer and correct but incomplete support. B. 0 points – incorrect explanation. C. 0 points – incorrect answer (no credit if not a fraction in lowest terms, even if added correctly).
6	3	A. 2 points – correct answer and complete support. B. 1 point – complete explanation. C. 0 points – incorrect answer (not in lowest terms).
7	2	A. 0 points – incorrect answer and insufficient support for any credit. B. 1 point – complete explanation. C. 1 point – correct answer.
8	4	A. 2 points – correct answer and complete support. B. 1 point – complete explanation. C. 1 point – correct answer.
9	1	A. 0 points – incorrect answer and insufficient support for any credit. B. 0 points – insufficient explanation for any credit. C. 1 point – correct answer.
10	3	A. 1 points – no credit for answer; complete support. B. 1 point – complete explanation. C. 1 point –correct answer.

Page	Score	Description
1	2	A. 0.5 point – incorrect answer; correct but incomplete support ("1 ÷ 6"). B. 1 point – complete explanation. C. 1 point – correct answer.
2	0	Nothing is correct for credit in any part.
3	4	A. 2 points – correct answer and complete support. B. 1 point – complete explanation. C. 1 point – correct answer.
4	1	A. 0.5 point – incorrect answer; correct but incomplete support ("1 ÷ 6"). B. 0 points – insufficient explanation for any credit. C. 1 point – correct answer.
5	1	A. 1 point – correct answer only; incorrect support. B. 0 points – incorrect explanation. C. 0 points – incorrect answer (no credit if not a fraction in lowest terms, even if added correctly).
6	2	A. 2 points – correct answer and complete support. B. 0 points – incorrect explanation. C. 0 points – incorrect answer.
7	4	A. 2 points – correct answer and complete support. B. 1 point – complete explanation. C. 1 point – correct answer.
8	3	A. 2 points – correct answer and complete support. B. 0 points – insufficient explanation for any credit. C. 1 point – correct answer.
9	2	A. 0 points – no credit for answer (repeating bar is in the wrong place); incorrect support. B. 1 point – complete explanation. C. 1 point – correct answer.
10	3	A. 1 point – no credit for the answer; complete support. B. 1 point – complete explanation. C. 1 point – correct answer.