

Answer Key

LAS AMERICAS ASPIRA ACADEMY

6TH GRADE SUMMER MATH PACKET—OPTIONAL

The purpose of this packet is to give you an opportunity to review crucial skills from this past year to help ensure that you are prepared for next year's math work. Our math teachers selected the topics that they thought were the most important to your success in the upcoming school year. There is no need to turn this packet in. In fact, the answers to this packet can be found at

<https://laalibrary.weebly.com/summer.html>. The reason we are making the answer key public to you is so that you can identify topics you might need help with. If you are struggling with a set of problems, feel free to check sites like khanacademy.org to see if they can help you. If you continue to struggle please feel free to reach out to me, Mr. Reitemeyer (michael.reitemeyer@laaa.k12.de.us), for support. Good luck and have a great summer.

1. [Fraction multiplication] Circle the column with the greater value.

A	B	Circle either A or B
$\frac{5}{17} \times \frac{2}{3}$	$\frac{5}{17} \times \frac{3}{2}$	A B
$\frac{27}{25} \times 36$	$\frac{30}{32} \times 36$	A B
$\frac{63}{54}$	$\frac{63}{54} \times \frac{62}{54}$	A B
$9 \times \frac{1}{3}$	$\frac{1}{3}$	A B

2. [Understanding fractions and decimals] Write $>$, $<$, or $=$ to make each statement true. [Hint: you don't need to do any multiplication or division here to solve any of these.]

a. $2 \div 3$ $<$ $2 \div \frac{1}{3}$

b. $0.2 \times \frac{1}{4}$ $<$ $\frac{2}{10} \times \frac{1}{3}$

c. $\frac{1}{6} \div 4$ $>$ $\frac{1}{6} \times \frac{1}{5}$

3. [Fraction operations] Gloria is making $\frac{1}{4}$ pound hamburgers. She has 9 pounds of beef to make the hamburgers. How many hamburgers can she make?

$$9 \div \frac{1}{4} = \boxed{36}$$

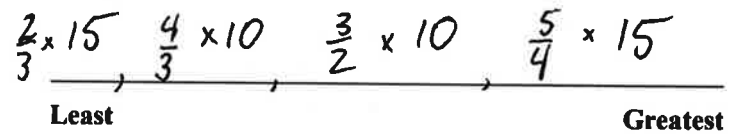
4. [Understanding fractions] Order the following from greatest to least:

$$\frac{5}{4} \times 15$$

$$\frac{4}{3} \times 10$$

$$\frac{2}{3} \times 15$$

$$\frac{3}{2} \times 10$$



5. [Equivalent fractions] Find the missing numerator or denominator.

a. $\frac{1}{5} = \frac{2}{10}$

d. $\frac{3}{5} = \frac{6}{10}$

b. $\frac{2}{6} = \frac{4}{12}$

e. $\frac{1}{5} = \frac{3}{15}$

c. $\frac{3}{5} = \frac{9}{15}$

f. $\frac{18}{24} = \frac{3}{4}$

$$g. \frac{45}{81} = \frac{5}{9}$$

$$h. \frac{3}{90} = \frac{1}{30}$$

6. [Equivalent fractions] Express each fraction as the sum of two or three equal fractional parts.

Rewrite each as a multiplication equation.

$$a. \frac{6}{7} \quad \frac{2}{7} + \frac{2}{7} + \frac{2}{7} = 3 \times \frac{2}{7} \quad \text{OR} \quad \frac{3}{7} + \frac{3}{7} = 2 \times \frac{3}{7}$$

$$b. \frac{9}{2} \quad \frac{3}{2} + \frac{3}{2} + \frac{3}{2} = 3 \times \frac{3}{2}$$

$$c. \frac{12}{10} \quad \frac{4}{10} + \frac{4}{10} + \frac{4}{10} = 3 \times \frac{4}{10} \quad \text{OR} \quad \frac{6}{10} + \frac{6}{10} = 2 \times \frac{6}{10}$$

$$d. \frac{15}{4} \quad \frac{5}{4} + \frac{5}{4} + \frac{5}{4} = 3 \times \frac{5}{4}$$

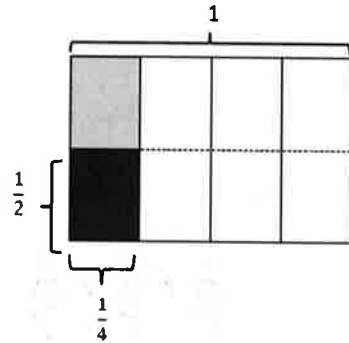
$$e. \frac{27}{5} \quad \frac{9}{5} + \frac{9}{5} + \frac{9}{5} = 3 \times \frac{9}{5}$$

7. [Fraction operations] Solve. Draw a rectangular fraction model to show your thinking. Then, write a multiplication sentence.

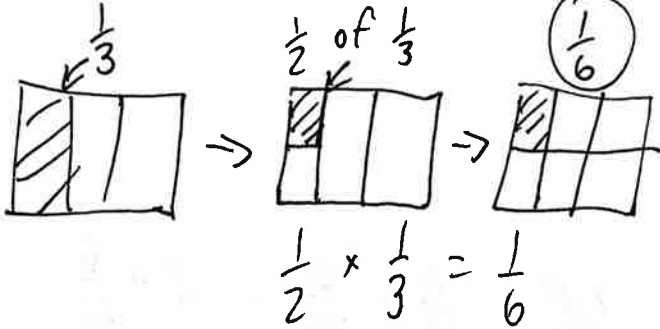
The first one has been done for you.

- a. Half of $\frac{1}{4}$ pan of brownies = $\frac{1}{8}$ pan of brownies.

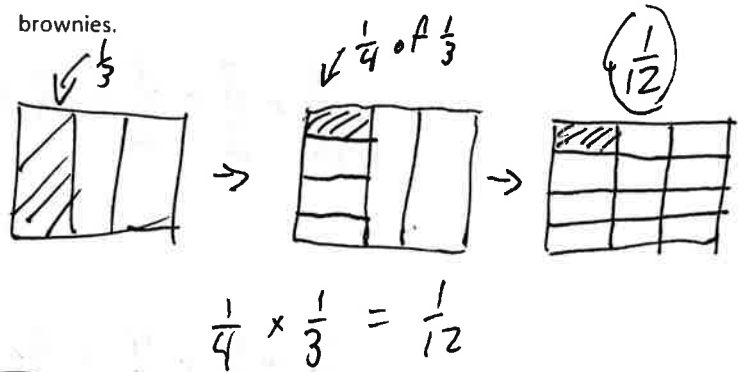
$$\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$$



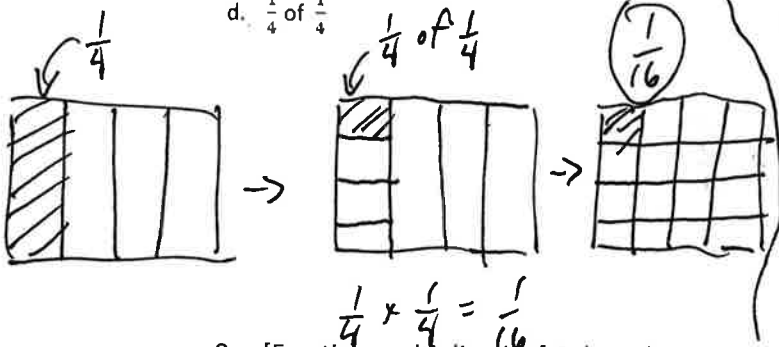
- b. Half of $\frac{1}{3}$ pan of brownies = $\frac{1}{6}$ pan of brownies.



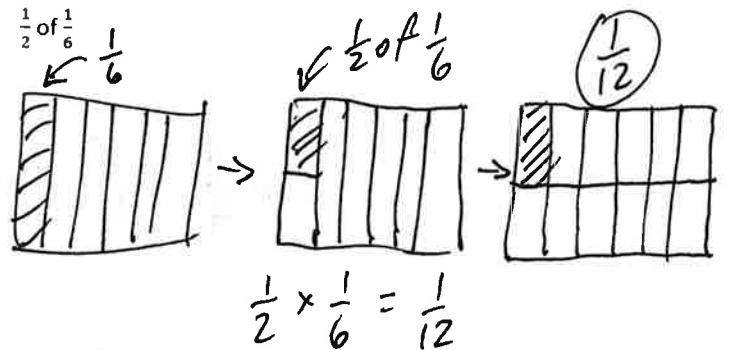
- c. A fourth of $\frac{1}{3}$ pan of brownies = $\frac{1}{12}$ pan of brownies.



- d. $\frac{1}{4}$ of $\frac{1}{4}$

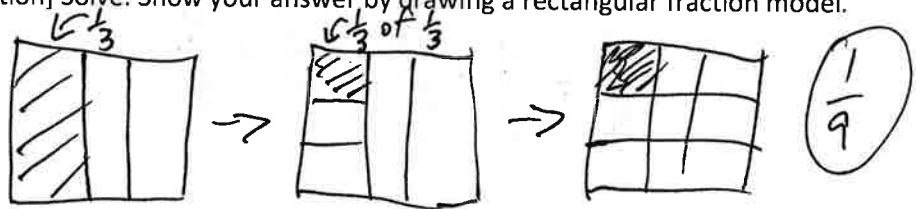


- e. $\frac{1}{2}$ of $\frac{1}{6}$

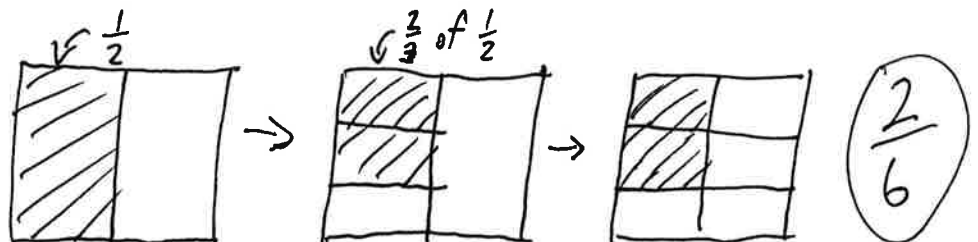


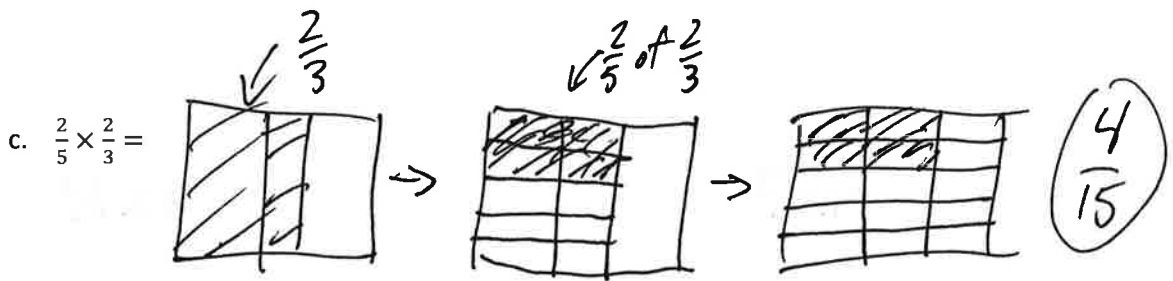
8. [Fraction multiplication] Solve. Show your answer by drawing a rectangular fraction model.

a. $\frac{1}{3} \times \frac{1}{3} =$



b. $\frac{2}{3} \times \frac{1}{2} =$





9. [Understanding place value] Circle each of the following expressions where 200,000 would be a reasonable estimate.

a. $2,146 \times 12$

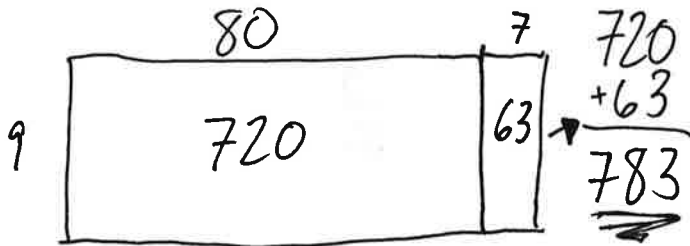
b. $21,467 \times 121$

c. $2,146 \times 121$

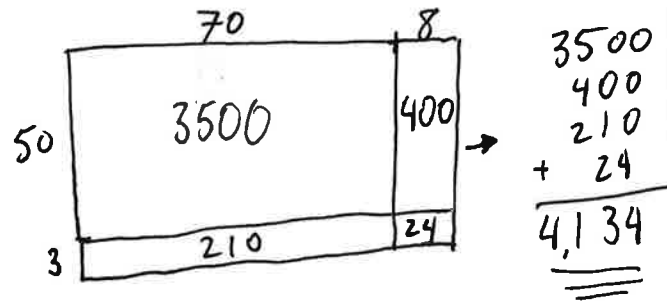
d. $21,477 \times 1,217$

10. [Multi-digit multiplication] Solve. Use a rectangular area model to justify your answer.

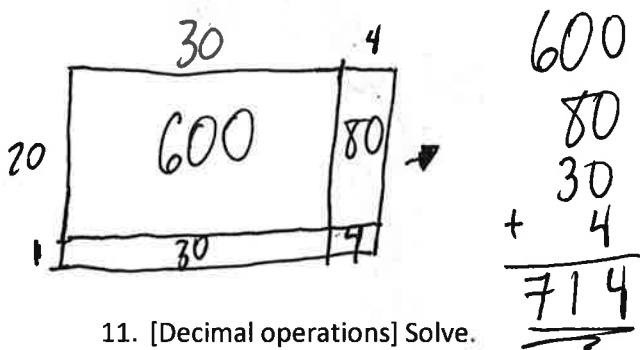
a. 87×9



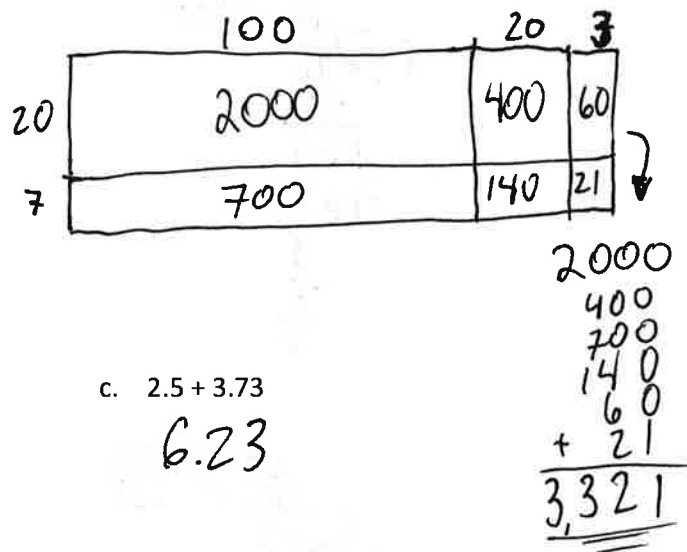
c. 78×53



b. 34×21



d. 123×27



11. [Decimal operations] Solve.

a. 1.2×5

6

c. $2.5 + 3.73$

6.23

b. 2.4×1.1

2.64

d. $3.08 - 2.19$

0.89

e. $10.2 - 6.13$

4.07

f. $98 - 62.31$

35.69

12. [Addition/subtraction with fractions] Solve.

a. $\frac{1}{4} + \frac{1}{8}$

$\frac{3}{8}$

c. $\frac{7}{10} - \frac{3}{5}$

$\frac{1}{10}$

b. $\frac{1}{3} + \frac{3}{5}$

$\frac{14}{15}$

d. $\frac{3}{5} - \frac{1}{6}$

$\frac{13}{30}$

13. [Multi-digit division] Solve.

a. $248 \div 8$

$20 \text{ } > \text{ } (31)$

$$\begin{array}{r} 8 \overline{) 248} \\ \underline{-80} \\ 168 \\ \underline{-160} \\ 8 \\ \underline{-8} \\ 0 \end{array}$$

c. $390 \div 15$

$20 \text{ } > \text{ } (26)$

$$\begin{array}{r} 15 \overline{) 390} \\ \underline{-300} \\ 90 \\ \underline{-60} \\ 30 \\ \underline{-30} \\ 0 \end{array}$$

b. $432 \div 6$

$20 \text{ } > \text{ } (72)$

$$\begin{array}{r} 6 \overline{) 432} \\ \underline{-300} \\ 132 \\ \underline{-120} \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

d. $7844 \div 212$

$20 \text{ } > \text{ } (37)$

$$\begin{array}{r} 212 \overline{) 7844} \\ \underline{-2120} \\ 5724 \\ \underline{-4240} \\ 1484 \\ \underline{-1060} \\ 424 \\ \underline{-424} \\ 0 \end{array}$$