

Grade 7 Hon Prep Work
1.7 Challenge Pr. w/ Multipl.

Name _____

Date _____

1. Find the value of the expression.

$$\frac{7+8+9}{2+3+4} \cdot \frac{6+9+12}{9+8+7}$$

2. What units digit a will make the addition problem correct?

$$\begin{array}{r} 23a \\ 524 \\ + 36a \\ \hline 1124 \end{array}$$

3. What is the sum of the digits a and b in the following multiplication problem?

$$\begin{array}{r} b3a1 \\ \times \quad b4 \\ \hline 9404 \\ + 470b0 \\ \hline a64b4 \end{array}$$

4. Evaluate $234 \cdot 997 - 233 \cdot 997$.

5. Select three different numbers from the set $\{2, 3, 5, 7, 9\}$ and place one in each box. What is the greatest possible product, expressed as a common fraction?

$$\frac{\square}{\square} \times \frac{1}{\square}$$

6. In the addition problem shown, whole numbers less than 10 are missing from the boxes. If the problem is done correctly, what is the sum of the numbers in these boxes?

$$\begin{array}{r} \square 63 \\ 7\square 2 \\ + 58\square \\ \hline \square 042 \end{array}$$

7. In the multiplication shown, each letter represents a different digit. What digit does the letter C represent?

$$\begin{array}{r} ABCDE \\ \times \quad E \\ \hline EDADE \end{array}$$

8. Find the smallest two-digit number that is twice the product of its digits.

9. In the division problem, the letters A, B, C, D, and E represent five different digits. Find the digit represented by C.

$$\begin{array}{r} 1B \\ A \overline{)C7} \\ \underline{A} \\ 3B \\ \underline{D5} \\ E \end{array}$$

10. In the multiplication shown, each * represents a digit. What is the sum of all possible products?

$$\begin{array}{r} 2 * \\ \times \quad * 7 \\ \hline * * * \\ * * * \\ \hline 2 * * 1 \end{array}$$

11. If you begin counting two consecutive whole numbers each second, starting on January 1, 2000, at 12:00 am, in what year will you reach 1 billion?

12. Compute without using a calculator: $26(64) - 24(64)$.

13. Compute using a calculator and try to use a simpler method: $(654,321)(654,321) - (654,326)(654,316)$.

Answer List

- | | | |
|----------|------------------|----------|
| 1. 3 | 2. 5 | 3. 7 |
| 4. 997 | 5. $\frac{3}{2}$ | 6. 24 |
| 7. 4 | 8. 36 | 9. 8 |
| 10. 4232 | 11. 2015 | 12. 2015 |
| 13. 2015 | | |

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