Extra Assessment Tasks

Multiplication and Division

15. I have 18 cubes. I want to put them into 3 containers. Each container must have the same number of cubes in it. How many cubes should I put in each container?

16. Denzel found the answer to $7 \times 5$ by counting: 5, 10, 15, 20, 25, 30, 35.
   Denzel wrote 35 for his answer. Is Denzel correct? Why? How did Denzel know to stop counting at 35?

17. Maria found the answer to $4 \times 9$ by writing:
   \[
   \begin{array}{ccc}
   9 & 18 & 27 \\
   +9 & +9 & +9 \\
   18 & 27 & 36 \\
   \end{array}
   \]
   Explain how you can use what Maria wrote to find the answer to 4 times 9.

18. Mary has 4 bags of candy. Matt has 6 bags of candy.
   There are 8 pieces of candy in each bag.
   How many pieces of candy do Mary and Matt have altogether?

19. 7 times 14 equals 98. What is 14 times 7? How do you know?

20. 8 times 15 equals 120. What is 9 times 15? How do you know?
21. 96 divided by 4 equals 24. What is 96 divided by 24? How do you know?

22. There are 32 chairs in a classroom.
   Each chair has 4 legs.
   How many chair legs are there in the classroom?

23. Matt has 120 cubes.
   He wants to put the cubes into bags.
   He wants to put 15 cubes into each bag.
   How many bags does he need?

24. \(256 \div 8 = \) _____

25. Maria knows that 12 times 36 is 432.
   Now she wants to know 24 times 36.
   She thinks there's an easy way to figure out this problem.
   Is there? What is it?

26. Kerry knows that 500 divided by 4 is 125.
   She also knows that 36 divided by 4 is 9.
   How can she use this information to find 536 divided by 4?

27. Which would give the same amount as 15 bags of 43 candies? Why?
   (a) Adding 10 bags of 40 candies to 5 bags of 3 candies.
   (b) Adding 10 bags of 43 candies to 5 bags of 43 candies.
28. To find 13 times 24, Emily wrote:

\[
\begin{align*}
10 \times 20 &= 200 \\
10 \times 4 &= 40 \\
3 \times 20 &= 60 \\
3 \times 4 &= 12 \\
\hline
200 &+ 40 &+ 60 &+ 12 = 312
\end{align*}
\]

Emily gave 312 as her answer.

Is Emily’s way of solving this problem correct?

Why or why not?

*Does this picture help you think about the problem?*

![Diagram showing 13 groups of 24 divided into 10 groups of 20, 3 groups of 20, 10 groups of 4, and 3 groups of 4.](image)
29. To divide 490 by 14, Kim wrote the following:

\[
\begin{align*}
10 \times 14 &= 140 \\
5 \times 14 &= 70 \\
490 - 140 &= 350 \\
350 - 140 &= 210 \\
210 - 140 &= 70 \\
70 - 70 &= 0
\end{align*}
\]

Kim said, “So, the answer is 35.”

How did Kim use the written information to find the answer?

30. The answers to some or all of the problems below can be added to find the answer to $17 \times 46$. Which answers should be added to find $17 \times 46$?

Try to figure this out without first calculating $17 \times 46$.

Explain your answer.

\[
\begin{align*}
10 \times 46 &= 460 \\
7 \times 46 &= 322 \\
10 \times 40 &= 400 \\
7 \times 6 &= 42
\end{align*}
\]
31. Matt solved the problem $161 \div 7$ like this.

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<th>23</th>
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<tr>
<td>7</td>
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Why did Matt put the 2 where he did?

What does this 2 tell you about dividing 161 by 7?

Why did Matt subtract 14?

Why didn’t he put the 14 all the way over to the right?

What does the 21 below the 4 tell you?

Why did Matt multiply and subtract to find the answer to a division problem?