Cookie Problem

Directions: Solve the following problems in any manner that you choose. Please include the full solution below along with an explanation of your solution.

Tim ate 100 cookies in 5 days. Each day he ate 6 more than the day before. How many cookies did he eat on the first day?

I subtracted 2 cookies off my previous answers because the first time I added all the 4's I ended up with 10 extra cookies.
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Tim ate 100 cookies in 5 days. Each day he ate 6 more than the day before. How many cookies did he eat on the first day?

\[
\begin{align*}
100 \div 5 &= 20 \\
6 \times 5 &= 30 \\
100 - 30 &= 70 \\
70 \div 5 &= 14
\end{align*}
\]

Therefore, he probably ate 14 on the first day.

\[
\begin{array}{c}
14 \\
20 \\
26 \\
32 \\
38 \\
\hline
100
\end{array}
\]

Started with 8.
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Tim ate 100 cookies in 5 days. Each day he ate 6 more than the day before. How many cookies did he eat on the first day?

\[ \frac{6n + 6n + 6n + 6n + 6n}{5} = 100 \]

\[ \frac{30n}{5} = 100 \]

\[ 6n = 100 \]

\[ \frac{6n}{25} = \frac{60}{25} \]

\[ n = 4 \]

\[ 6n = 6 \cdot 4 = 24 \]

\[ \frac{24 \times 4}{96} \]

\[ +4 \]

\[ = 100 \]
The Cookie Problem

Todd ate one hundred cookies in five days. Each day he ate six more than he did the day before. How many cookies did he eat on the first day?

\[
\begin{align*}
100 &= 5n + 6 \\
5 &= 5n \\
\frac{6}{5n} &= \frac{100}{5} \\
6 &= 5n \\
95 &= 100 - 5n
\end{align*}
\]
100 = 5 days

M T W T F
6 12 18 24 30

100 = 5 days + 36

\[
\begin{align*}
12 & + 6 \\
+ 18 & + 10 \\
+ 12 & + 6 \\
+ 18 & + 12 \\
+ 12 & + 6 \\
\hline
12 & + 6 \\
18 & + 10 \\
30 & + 12 \\
48 & + 12 \\
66 & + 6 \\
\hline
36 & + 6 \\
42 & + 12 \\
54 & + 18 \\
72 & + 24 \\
96 & + 30 \\
\hline
100 &
\end{align*}
\]
The Cookie Problem

There are one hundred cookies in five days. Each day he ate six more than he did the day before. How many cookies did he eat on the first day?

100 cookies 5 days
He ate 6 more than the day before.

\[ \begin{align*}
8 + 5 \times 6 &= 100 \\
6x + 5 &= 100 \\
x &= 16 \\
16 \div 5 &= 100 \\
5 &= 20 \\
5 \div 20 &= 25 \\
5 \div 20 &= 30 \\
5 \div 20 &= 35 \\
5 \div 20 &= 40 \\
5 \div 20 &= 45 \\
5 \div 20 &= 50 \\
5 \div 20 &= 55 \\
5 \div 20 &= 60 \\
5 \div 20 &= 65 \\
5 \div 20 &= 70 \\
5 \div 20 &= 75 \\
5 \div 20 &= 80 \\
5 \div 20 &= 85 \\
5 \div 20 &= 90 \\
5 \div 20 &= 95 \\
5 \div 20 &= 100 \\
\end{align*} \]
<table>
<thead>
<tr>
<th>Days</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature (°C)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>12</td>
<td>20</td>
<td>22</td>
<td>26</td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td>18</td>
<td>16</td>
<td>22</td>
<td>28</td>
<td>34</td>
<td>140</td>
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<td>18</td>
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<td>22</td>
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<tr>
<td>90</td>
<td></td>
<td></td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The total temperature sum for the week is 500°C.