A collection of 17 coins has a value of $1.20. The collection is made up of nickels and dimes. How many nickels and dimes are in the collection?

<table>
<thead>
<tr>
<th>Number of Coins</th>
<th>Coin Value</th>
<th>Total Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickels</td>
<td>$x$</td>
<td></td>
</tr>
<tr>
<td>Dimes</td>
<td>$17 - x$</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total value of nickels $+\quad$ Total value of dimes $=\quad$ Total combined value of coins

$+\quad$ $=\quad$
\[0.05x + 0.10(17 - x) = 1.20\]
\[
\begin{bmatrix}
0.05x + 0.10(17 - x)
\end{bmatrix} = [1.20]
\]
\[
\begin{align*}
5x + 170 - 10x &= 120 \\
-5x + 170 &= 120 \\
-5x &= -50 \\
x &= 10
\end{align*}
\]

Note: 10 Nickels = $0.50
7 Dimes = $0.70
Total Value = $1.20

\[
x = \text{Nickels}
\]
\[
17 - x = \text{Dimes}
\]
A collection of 42 coins has a value of $6.45. The collection is made up of dimes and quarters. How many dimes and quarters are in the collection?
\[ 0.10x + 0.25 \left( 42 - x \right) = 6.45 \]

\[
\begin{bmatrix} 0.10x + 0.25 \left( 42 - x \right) \end{bmatrix} = \begin{bmatrix} 6.45 \end{bmatrix}
\]

\[ 10x + 25(\quad) = \]

\[
10x + 1050 - 25x = 645
\]

\[-15x + 1050 = 645
\]

\[-15x = -405
\]

\[ x = \quad
\]

Note: 27 Dimes = $2.70
15 Quarters = $3.75
Total Value = $6.45

\[ x = \quad Dimes
\]

\[ 42 - x = \quad Quarters\]