b. 

Milk Needed to Make Cheddar Cheese

\[ \text{Cheddar Cheese (pounds)} \]

\[ \text{Milk (pounds)} \]

\[ \begin{array}{cccccc}
\text{Cheddar Cheese (pounds)} & 0 & 10 & 20 & 30 & 40 & 50 \\
\text{Milk (pounds)} & 0 & 10 & 20 & 30 & 40 & 50 \\
\end{array} \]

\[ \frac{1}{10} m = c \text{ or } m = 10c \]

d. \[ \frac{1}{10} \] for the equation \[ \frac{1}{10} m = c \]

10 for the equation \[ m = 10c \]

e. Possible answers: The graph visually shows the relationship between amounts of milk and cheese. The table allows one to look up how much milk is needed to yield any given amount of cheese. The equation allows for quick calculation of the amount of milk needed for any amount of cheese.

\begin{itemize}
\item a. \$0.75
\item b. ii. around 70 songs, but less than 70; since 35 songs is \$26.25 \approx \$25, 70 songs would be around \$50; however, since \$26.25 > \$25, it would be a little less than 70 songs.
\end{itemize}

c. Prices of Songs

\begin{tabular}{|c|c|c|c|c|c|c|}
\hline
\text{Number of Songs, } n & 35 & 4 & 50 & 1 & 70 & 20 \\
\hline
\text{Cost, C} & \$26.25 & \$3 & \$37.50 & \$0.75 & \$52.50 & \$15 \\
\hline
\end{tabular}

d. Javier is correct. You can test who is correct by substituting the original number of songs (\( n = 35 \)) into both equations. Find which equation gives the correct cost in dollars. Lucius’s equation produces a cost of approximately \$19.69, which is incorrect. Javier’s equation gives \$26.25,
which is correct.

**Note:** In this case, it is assumed that one of the two equations is correct; however, students should get in the habit of thinking about what information the equation gives instead of just checking one value.

11. a. Courtney’s, Julio’s, and Kimi’s methods are correct. Answers will vary on which method is most convincing. Elliot’s method is incorrect because he compares the prices of forty 2-packs (80 erasers) and one 40-pack (40 erasers).

   b. As alternative methods, students might scale to a different value similar to methods 3 and 4, or they might set up their proportion to the rate of cost to erasers. Students might also reason using different representations—for example, graphing their solutions or setting up a table.

12. a. $1.50 per dozen apples, or about $.13 per apple

   \[ C = 1.5d \]

   b. $.16 per bottle

   \[ C = 0.16b \]

   c. $.12 per ounce of mozzarella cheese

   \[ C = 0.12m \]

13. a. The 8-pack is the better deal; each glue stick is about $.50.

   b. The single roll is the better deal; each roll in the 12-pack is about $.20.

   c. The 100-pack is the better deal; 100 single pencils for $.05 apiece would cost $5.00, which is more than the 100-pack price.

   d. Buying the 50-pack of paper clips is cheaper; two 25-packs (50 total) would cost \( $.45 \times 2 = $.90 \), which is more than the $.89 it costs to buy a 50-pack.

**Connections**

24. a. Yes; the scale factor between the large room and small room is 0.75. The ratio is 4 : 3.