

4-13

Lesson ~~4-13~~ → System Word Problems with Slope Intercept Equations

Green Music Downloads is \$17.50 to join
and each song is \$0.65

Purple Music Downloads is \$35.75 to join
and each song is \$0.40

Decide when each would be cheaper!

$$y = 0.65x + 17.5$$

$$y = 0.4x + 35.75$$

$$\begin{array}{r} 0.65x + 17.5 = 0.4x + 35.75 \\ -0.4x \quad -17.5 \quad -0.4x \quad -17.5 \\ \hline \end{array}$$

$$0.25x = 18.25$$

$$x = 73$$

$$y = 0.65(73) + 17.5$$

$$y = 0.4(73) + 35.75$$

$$y = 47.45 + 17.5$$

$$y = 29.2 + 35.75$$

$$y = 64.95$$

$$y = 64.95$$

At 73 songs, both cost \$64.95...

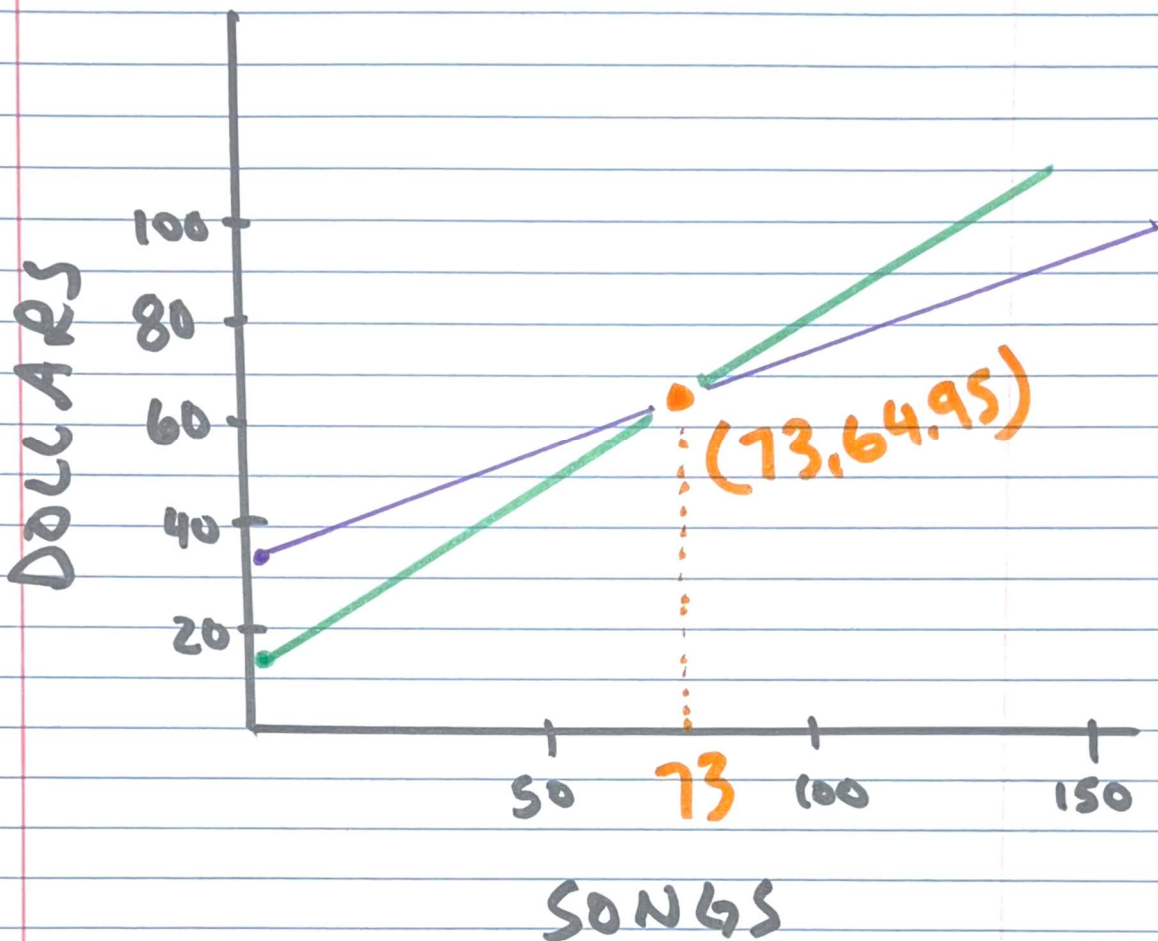
GREEN

$$y = 0.65x + 17.5$$

Purple

$$y = 0.4x + 35.75$$

solution (73, 64.95)



Less Than
73 songs
GO GREEN!

More Than
73 songs
GO PURPLE!