

5. The cost to rent a backhoe is \$24.00 for the first 4 hours and \$5.40 per hour for each additional hour. What is the maximum number of hours Alex can rent a backhoe if his budget allows him to spend at least \$30.00 and at most \$45.00 on the rental? Round your answer to the nearest whole hour that satisfies the inequality.
- A. 5 hours
 B. 8 hours
 C. 7 hours
 D. 4 hours
6. A motel charges \$69.95 each night for two adults plus \$10.95 for each additional person. What is the maximum number of children a mother and father can bring on vacation if their budget allows them to spend more than \$100.00 but less than \$125.00 per night on a motel room?
- A. 2 children
 B. 5 children
 C. 3 children
 D. 6 children

7. The cost to park a vehicle in a public parking lot downtown is \$5.00 for up to one hour plus \$3.25 per hour after the first hour. What is the maximum number of hours a business person can park in the public lot if his company will reimburse him at least \$5.00 and at most \$25.00 a day to park? Round your answer to the nearest whole hour that satisfies the inequality.
- A. 6 hours
 B. 7 hours
 C. 1 hour
 D. 0 hours
- x = # of hours vehicle is parked*
- $$5 \leq 5 + 3.25(x-1) \leq 25$$
- Distribute*
- $$5 \leq 5 + 3.25x - 3.25 \leq 25$$
- combine like terms*
- $$5 \leq 1.75 + 3.25x \leq 25$$
- subtract 3 times*
- $$\begin{array}{r} 5 \\ -1.75 \\ \hline 3.25 \end{array} \leq \begin{array}{r} 1.75 \\ -1.75 \\ \hline 3.25x \end{array} \leq \begin{array}{r} 25 \\ -1.75 \\ \hline 23.25 \end{array}$$
- Divide 3 times*
- $$\frac{3.25}{3.25} \leq \frac{3.25x}{3.25} \leq \frac{23.25}{3.25}$$
- Round up* $1 \leq x \leq 7.15$ *Round down*

8. The cost to run a sewer pipe from the center of the street to the center of a new house is \$525.00 plus \$12.75 per foot of pipe. What is the maximum number of feet a house can be located from the center of the street if a builder can spend more than \$1,000.00 but less than \$2,000.00 on the sewer pipe installation? Round your answer to the nearest whole foot that satisfies the inequality.
- A. 37 feet
 B. 116 feet
 C. 38 feet
 D. 115 feet