Furnace Repairs

Antonio's furnace has quit working during the coldest part of the year. He decides to call some furnace specialists to see what it might cost to have the furnace fixed. Since he is unsure of the parts he needs, he decides to compare the cost based only on the service fee and labor cost. Below are the price estimates he has gathered. Each company has also given him an estimate of the time it will take to fix the furnace.

- Company A charges $35 per hour
- Company B charges a $20 service fee for coming out to the house and then $25 per each additional hour.

For which time intervals should Antonio choose Company A, Company B?

Answer: A

Support your decision with sound reasoning and representations. Consider including equations, tables, and/or graphs.

Because 35 a hour is less than 45 a hour.
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For which time intervals should Antonio choose Company A, Company B?

Answer: Company B will be the better price after two hours.

Support your decision with sound reasoning and representations. Consider including equations, tables, and/or graphs.

<table>
<thead>
<tr>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
<tbody>
<tr>
<td>$35/hr</td>
<td>$25/hr</td>
</tr>
<tr>
<td>1 hr = 35$</td>
<td>1 hr = 25 + 20 = 45$</td>
</tr>
<tr>
<td>2 hr = 70$</td>
<td>2 hr = 50 + 20 = 70$</td>
</tr>
<tr>
<td>3 hr = 105$</td>
<td>3 hr = 75 + 20 = 95$</td>
</tr>
<tr>
<td>4 hr = 140$</td>
<td>4 hr = 100 + 20 = 120$</td>
</tr>
<tr>
<td>5 hr = 175$</td>
<td>5 hr = 125 + 20 = 145$</td>
</tr>
</tbody>
</table>
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For which time intervals should Antonio choose Company A, Company B?

Answer: ____________________________

Support your decision with sound reasoning and representations. Consider including equations, tables, and/or graphs.

\[
\begin{align*}
\text{Company A:} & \quad 35 \text{ hours} \\
\text{Company B:} & \quad 20 + 45 + 25 \text{ hours}
\end{align*}
\]

I choose B because it costs less.
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For which time intervals should Antonio choose Company A, Company B?

Answer: **Company A**

Support your decision with sound reasoning and representations. Consider including equations, tables, and/or graphs.
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For which time intervals should Antonio choose Company A, Company B?

Answer: I think Company A is their best company because you don't have to pay for them to come.

Support your decision with sound reasoning and representations. Consider including equations, tables, and/or graphs.

I think it is the best one because you don't have to charge more for them to come. For them to come to your house, Company B charges a $20 service fee with $25 per each additional hour.
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For which time intervals should Antonio choose Company A, Company B?

Answer: He would probably pick Company B for 3 hours.

Support your decision with sound reasoning and representations. Consider including equations, tables, and/or graphs.

A) 35 70 105 140
   1 hour 2 hours 3 hours 4 hours

B) 45 70 95 120
   1 hour 2 hours 3 hours 4 hours
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For which time intervals should Antonio choose Company A, Company B?

Answer: Company B if more than 3 hrs; Company A if 3 hrs or less

Support your decision with sound reasoning and representations. Consider including equations, tables, and/or graphs.

Company B if more than 3 hrs cause it would be for 4 hrs $140 so I would pick company B but if one hour it would be a only $35 for B it 3/hr

I would pick A.