Buses

This problem gives you the chance to:
• interpret and use a travel graph

The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.

   The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)

   a. How far is it from City A to City B? \( \frac{25}{\text{miles}} \)

   b. How long does the bus journey take? \( \frac{30}{\text{minutes}} \)

\[
\begin{array}{c}
\text{Distance} \\
\text{in miles}
\end{array}
\]

\[
\begin{array}{c}
0 \\
A
\end{array}
\]

\[
\begin{array}{c}
30 \\
B
\end{array}
\]

\[
\begin{array}{c}
0900 \\
0910 \\
0920 \\
0930 \\
0940 \\
0950 \\
1000 \\
1010 \\
1020
\end{array}
\]

\[
\begin{array}{c}
\text{Time}
\end{array}
\]

2. Another bus leaves City B at 0900 and arrives at City A at 0930.

   a. Draw a line on the diagram to show the journey of this second bus.

   b. At what time do the two buses pass each other? \( \frac{0915}{\text{minutes}} \)
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

Explain how you figured it out.

Every 10 minutes on line B these would be a line so 50÷10 = 5.

4 miles
Buses

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The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.
   
   The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)
   a. How far is it from City A to City B? \( \frac{25}{1} \) miles
   b. How long does the bus journey take? \( \frac{30}{1} \) minutes

2. Another bus leaves City B at 0900 and arrives at City A at 0930.
   a. Draw a line on the diagram to show the journey of this second bus.
   b. At what time do the two buses pass each other? 10:15
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

[student's answer: three]

Explain how you figured it out.

three, because for each ten minutes that passes, he meets another bus, and it takes him 30 minutes, or 3 x 10 to get to City B

[student's answer: about 10 miles]

c. How far is the bus from City A when it meets the first bus travelling in the opposite direction?
Buses

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The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.

The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)

a. How far is it from City A to City B? \( \frac{2}{5} \) miles

b. How long does the bus journey take? \( 30 \) minutes

2. Another bus leaves City B at 0900 and arrives at City A at 0930.

a. Draw a line on the diagram to show the journey of this second bus.

b. At what time do the two buses pass each other? \( 9:15 \) am
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

Explain how you figured it out.

because it's a 30 min drive to
a bus leaves every 20 min.

12.5 miles

C. How far is the bus from City A when it meets the first bus travelling in the opposite direction?
Buses
This problem gives you the chance to:
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The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.
   a. How far is it from City A to City B?  \( \frac{25}{\, \text{miles}} \)
   b. How long does the bus journey take?  \( \frac{20}{\, \text{minutes}} \)

2. Another bus leaves City B at 0900 and arrives at City A at 0930.
   a. Draw a line on the diagram to show the journey of this second bus.
   b. At what time do the two buses pass each other?  \( 9:15 \)
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B? 

   Explain how you figured it out.

   \[ \frac{30 \text{ total minutes}}{5 \text{ minute intervals}} \text{ when meeting each bus} = 6 \text{ buses} \]

   \[ \checkmark \]

   6 buses  \[ \checkmark \]

   1

   1

   c. How far is the bus from City A when it meets the first bus travelling in the opposite direction?

   \[ 9 \text{ miles} \]

   0
Buses
This problem gives you the chance to:
  • interpret and use a travel graph

The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.

   The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)
   a. How far is it from City A to City B? 25 miles ✓
   b. How long does the bus journey take? 30 minutes ✓

   ![Distance-Time Graph]

2. Another bus leaves City B at 0900 and arrives at City A at 0930.

   a. Draw a line on the diagram to show the journey of this second bus.
   b. At what time do the two buses pass each other? 9:15 ✓
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

Explain how you figured it out.

Buses leave City a & b every ten minutes the graphs show where they meet.

c. How far is the bus from City A when it meets the first bus travelling in the opposite direction?

12+13 mile
Buses
This problem gives you the chance to:
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The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.
   a. How far is it from City A to City B? \( \frac{25}{30} \) miles
   b. How long does the bus journey take? \( \frac{30}{30} \) minutes

2. Another bus leaves City B at 0900 and arrives at City A at 0930.
   a. Draw a line on the diagram to show the journey of this second bus.
   b. At what time do the two buses pass each other? 0915
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

Explain how you figured it out.

I drew lines from B to A
and counted them, not including where it stops.

c. How far is the bus from City A when it meets the first bus travelling in the opposite direction? 4 miles
Buses

This problem gives you the chance to:
- interpret and use a travel graph

The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.

   The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)

   a. How far is it from City A to City B? __25__ miles

   b. How long does the bus journey take? __30__ minutes


![Distance-time graph]

2. Another bus leaves City B at 0900 and arrives at City A at 0930.

   a. Draw a line on the diagram to show the journey of this second bus.

   b. At what time do the two buses pass each other? __9:15__
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

   Explain how you figured it out.

   There will be two one that left at 0900 for City A and one that left at 09:20 for City A.

   c. How far is the bus from City A when it meets the first bus travelling in the opposite direction?

      3 miles.
Buses

This problem gives you the chance to:
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The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.

   The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)

   a. How far is it from City A to City B? \( \frac{25}{\text{miles}} \)
   b. How long does the bus journey take? \( 30 \text{ minutes} \)

2. Another bus leaves City B at 0900 and arrives at City A at 0930.

   a. Draw a line on the diagram to show the journey of this second bus.

   b. At what time do the two buses pass each other? \( 14 \text{ minutes} \)
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

Explain how you figured it out.

\( \text{because it shows on the graph that the line crosses over 1 line.} \)

(c. How far is the bus from City A when it meets the first bus travelling in the opposite direction?

\( 4 \text{ minutes} \)}
Buses

This problem gives you the chance to:
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The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.

   The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)

   a. How far is it from City A to City B? \( \frac{25}{30} \) miles

   b. How long does the bus journey take? \( \frac{30}{30} \) minutes

2. Another bus leaves City B at 0900 and arrives at City A at 0930.

   a. Draw a line on the diagram to show the journey of this second bus.

   b. At what time do the two buses pass each other? \( \text{about } 0915 \)
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

   

   Explain how you figured it out.

   I drew lines until they would no longer cross and I got 5.

   

   5

   

   ✓

   

c. How far is the bus from City A when it meets the first bus travelling in the opposite direction?

   22 miles
The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.

   The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)

   a. How far is it from City A to City B? \( \frac{25}{25} \) miles

   b. How long does the bus journey take? \( \frac{30}{30} \) minutes

2. Another bus leaves City B at 0900 and arrives at City A at 0930.

   a. Draw a line on the diagram to show the journey of this second bus.

   b. At what time do the two buses pass each other? \( \frac{9:15\, am}{(0915)} \)
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

   Explain how you figured it out.

   the diagram! If you keep adding lines, it shows you how many

   buses.

   c. How far is the bus from City A when it meets the first bus travelling in the opposite direction?
The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.

   The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)

   a. How far is it from City A to City B?  25  1 miles
   b. How long does the bus journey take?  30  1 minutes

2. Another bus leaves City B at 0900 and arrives at City A at 0930.

   a. Draw a line on the diagram to show the journey of this second bus.

   b. At what time do the two buses pass each other?  09:15  1
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.  

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?  

5 buses

Explain how you figured it out.

I drew all the other buses and counted how many crossed paths with the bus in question.

c. How far is the bus from City A when it meets the first bus travelling in the opposite direction?

4 miles
Buses

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The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.

   The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)

   a. How far is it from City A to City B? \( \frac{25}{\text{miles}} \)
   
   b. How long does the bus journey take? \( \frac{30}{\text{minutes}} \)

2. Another bus leaves City B at 0900 and arrives at City A at 0930.

   a. Draw a line on the diagram to show the journey of this second bus.

   b. At what time do the two buses pass each other? \( 9:12 \)
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

Explain how you figured it out.

The buses leave every 10 min.

\[2 \times 0\]

How far is the bus from City A when it meets the first bus travelling in the opposite direction?

\[15 \text{ miles} \times 0\]
Buses

This problem gives you the chance to:
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The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.

   The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)
   
   a. How far is it from City A to City B? 25 miles
   
   b. How long does the bus journey take? 20 minutes

2. Another bus leaves City B at 0900 and arrives at City A at 0930.

   a. Draw a line on the diagram to show the journey of this second bus.

   b. At what time do the two buses pass each other? 9:15
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

Explain how you figured it out.

The graph shows two buses passing it before it gets there.

0

c. How far is the bus from City A when it meets the first bus travelling in the opposite direction?

0

miles
Buses

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The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.

   The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)
   a. How far is it from City A to City B? 25 miles
   b. How long does the bus journey take? 30 minutes

2. Another bus leaves City B at 0900 and arrives at City A at 0930.
   a. Draw a line on the diagram to show the journey of this second bus.
   b. At what time do the two buses pass each other? 9:16 (0916)
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

Explain how you figured it out.

because there will be one from B to A at 910, 920, 930 and A to B at 910 and 930.

0

c. How far is the bus from City A when it meets the first bus travelling in the opposite direction?

15 miles
Buses

This problem gives you the chance to:
• interpret and use a travel graph

The diagram below is a distance-time graph.

1. The sloping line shows the journey of a bus from City A to City B.

   The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)

   a. How far is it from City A to City B? 25 miles
   b. How long does the bus journey take? 30 minutes

2. Another bus leaves City B at 0900 and arrives at City A at 0930.

   a. Draw a line on the diagram to show the journey of this second bus.
   b. At what time do the two buses pass each other? 12.5
3. Buses leave City A and City B every 10 minutes during the morning, repeating the two journeys shown on your graph.

a. On your graph, draw a line to show the bus that leaves City A at 0920.

b. How many buses traveling in the opposite direction will this bus meet before it reaches City B?

Explain how you figured it out.

b/c there's 50 minutes and each bus leaves at 10 minute intervals.

c. How far is the bus from City A when it meets the first bus travelling in the opposite direction?