

# Buses

# T1

This problem gives you the chance to:

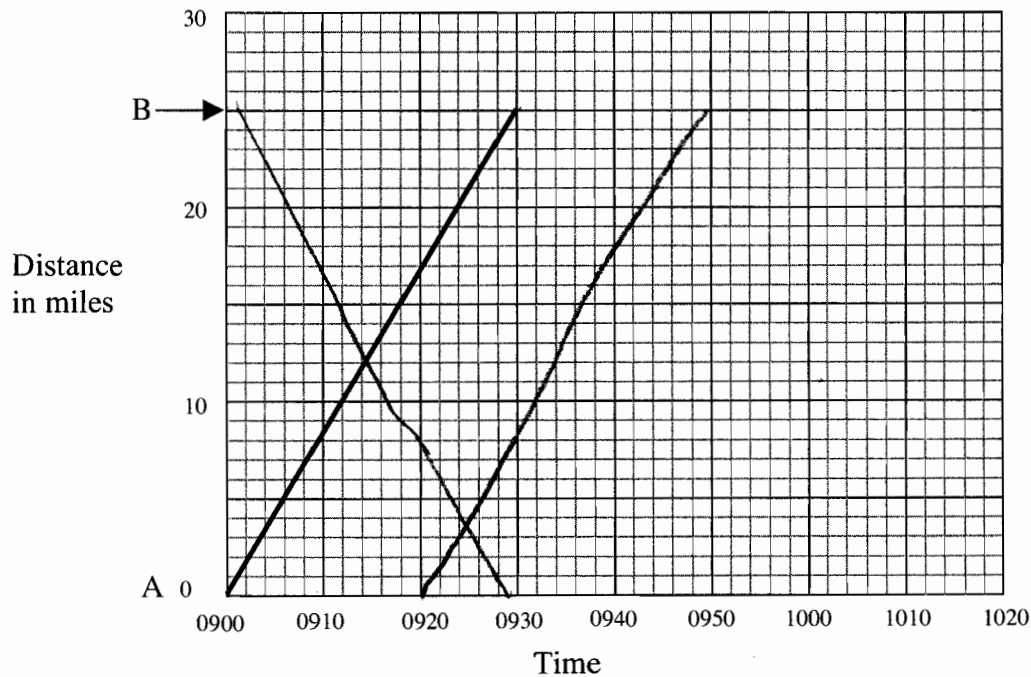
- interpret and use a travel graph

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? 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?

5

Explain how you figured it out.

Every 10 minutes on line B there would  
be a line 50  $50 \div 10 = 5$ .

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

4 miles

# Buses

# T2

This problem gives you the chance to:

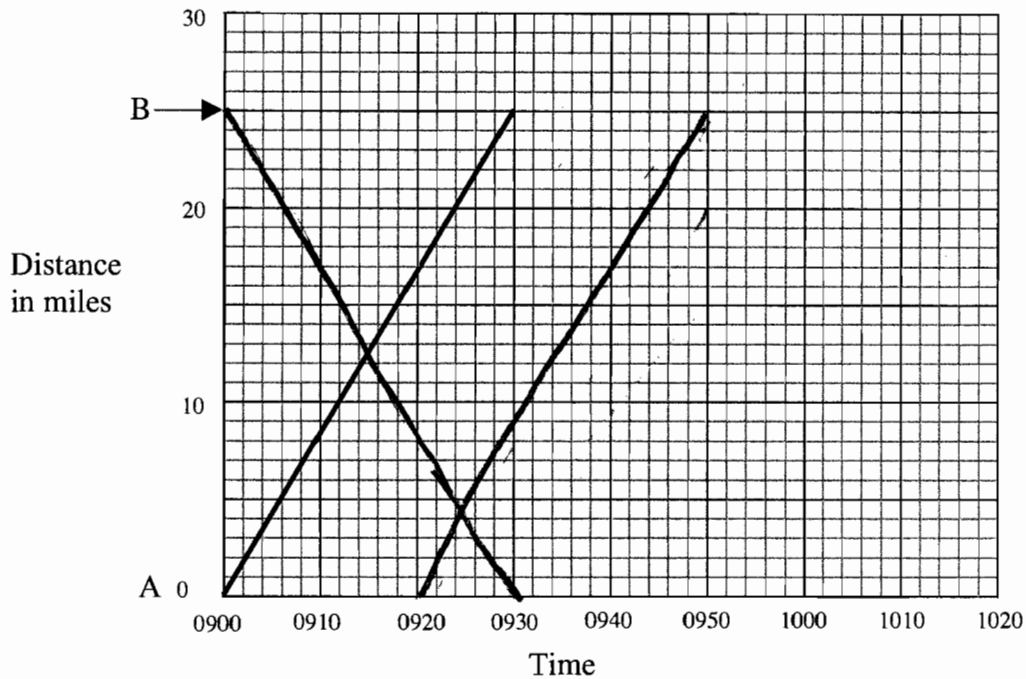
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The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)

- 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? 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?

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  $3 \times 10$  to get to City B

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

about 10 miles

# Buses

# T3

This problem gives you the chance to:

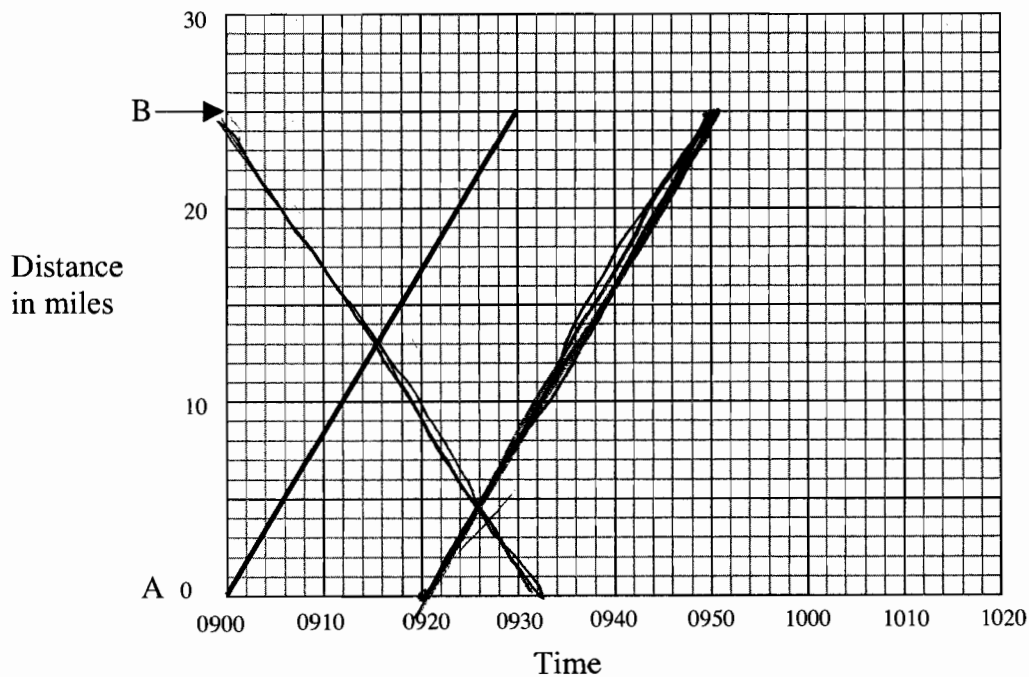
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- a. How far is it from City A to City B? 25 miles
- b. How long does the bus journey take? 30 minutes



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?

9:15 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?

2

Explain how you figured it out.

because its a 30min drive &  
a bus leaves every 20 min.

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

12.5 miles

# Buses

# T4

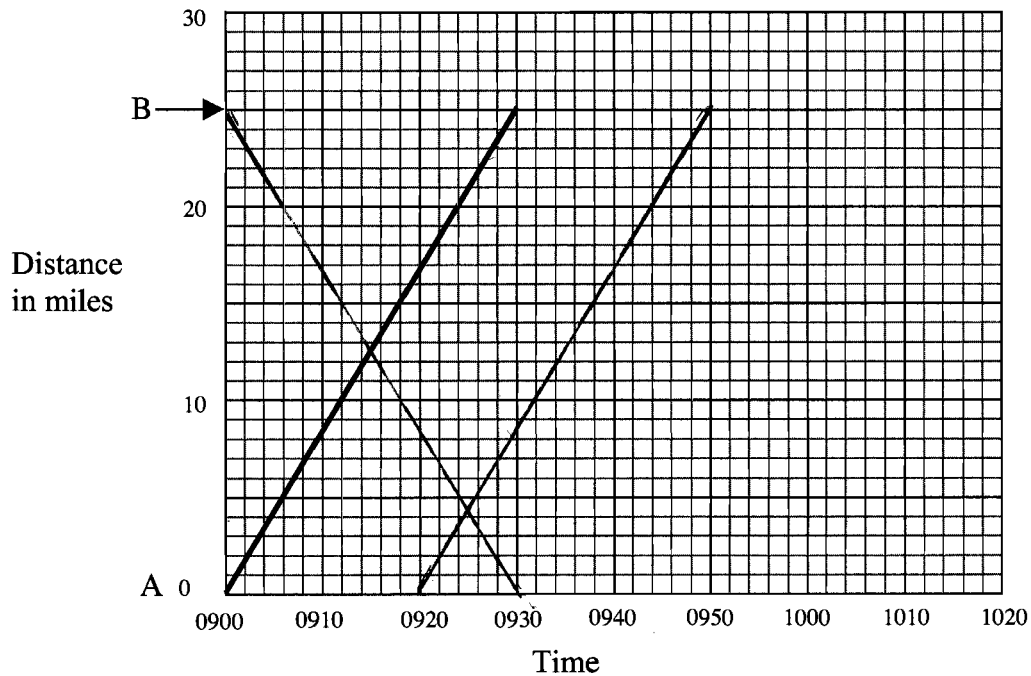
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The diagram below is a distance-time graph.

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- 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? 9:15

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?

6 buses

Explain how you figured it out.

30 total minutes  $\div$  5 minute intervals when  
meeting each bus = (6 buses)

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

9 miles



# Buses

# T5

This problem gives you the chance to:

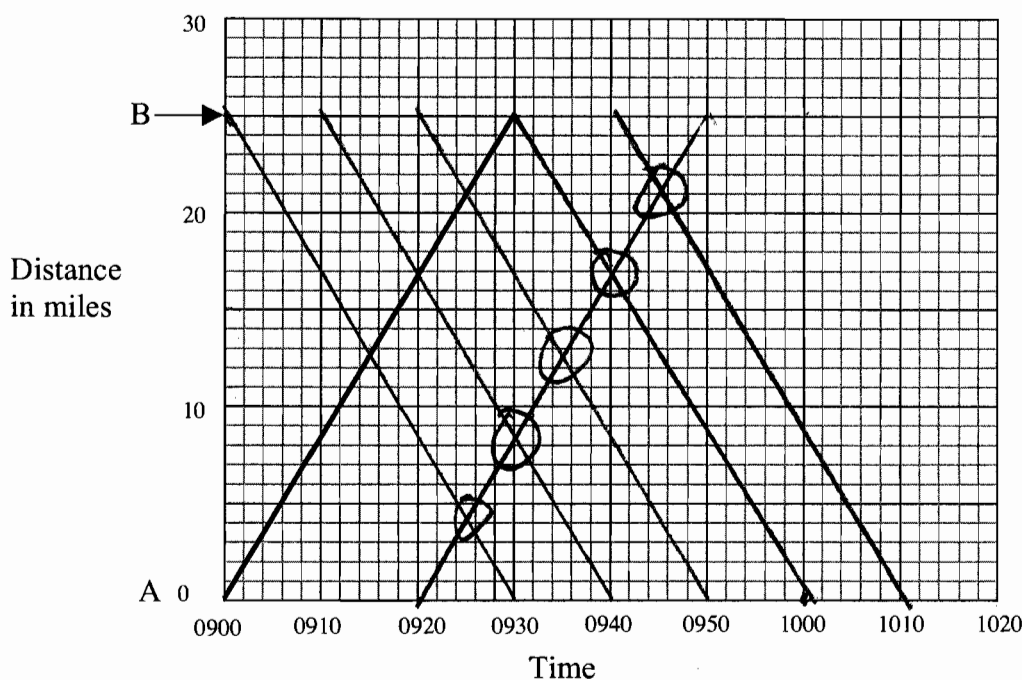
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- a. How far is it from City A to City B? 25 miles
- b. How long does the bus journey take? 30 minutes



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? 9:15

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?

5

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 miles

# Buses

# S1

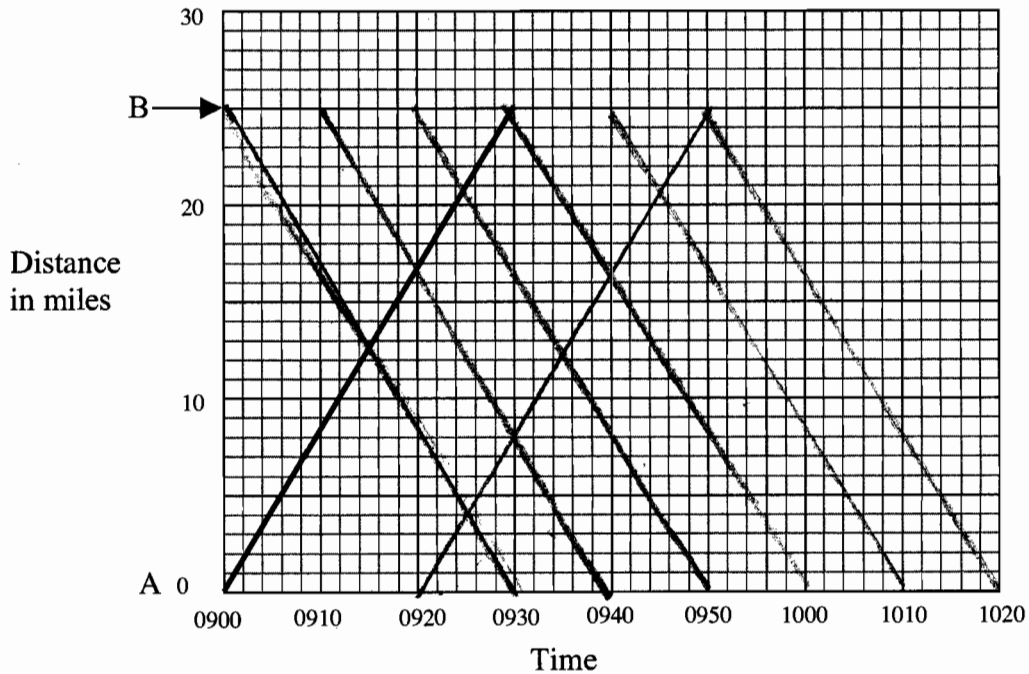
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- a. How far is it from City A to City B? 25 miles
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2. Another bus leaves City B at 0900 and arrives at City A at 0930.

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?

5

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

# S2

This problem gives you the chance to:

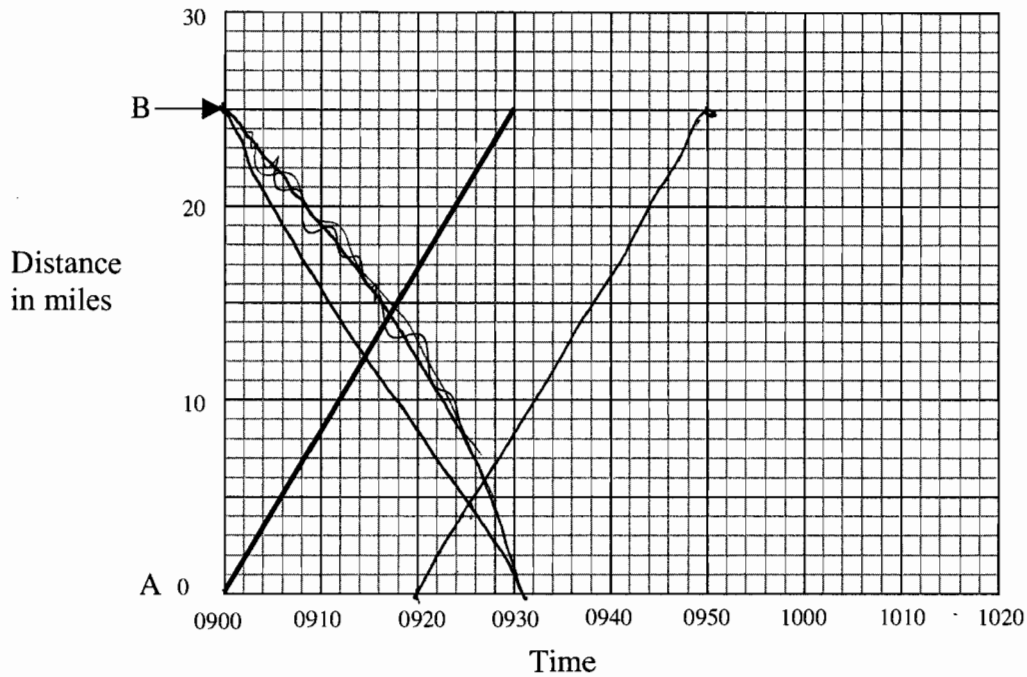
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The bus leaves City A at 9am (0900) and arrives at City B at 9:30am (0930)

- 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? 9:15

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 9:00 for City A and one that left at 9:20 for city A.

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

5 miles.

# Buses

# S3

This problem gives you the chance to:

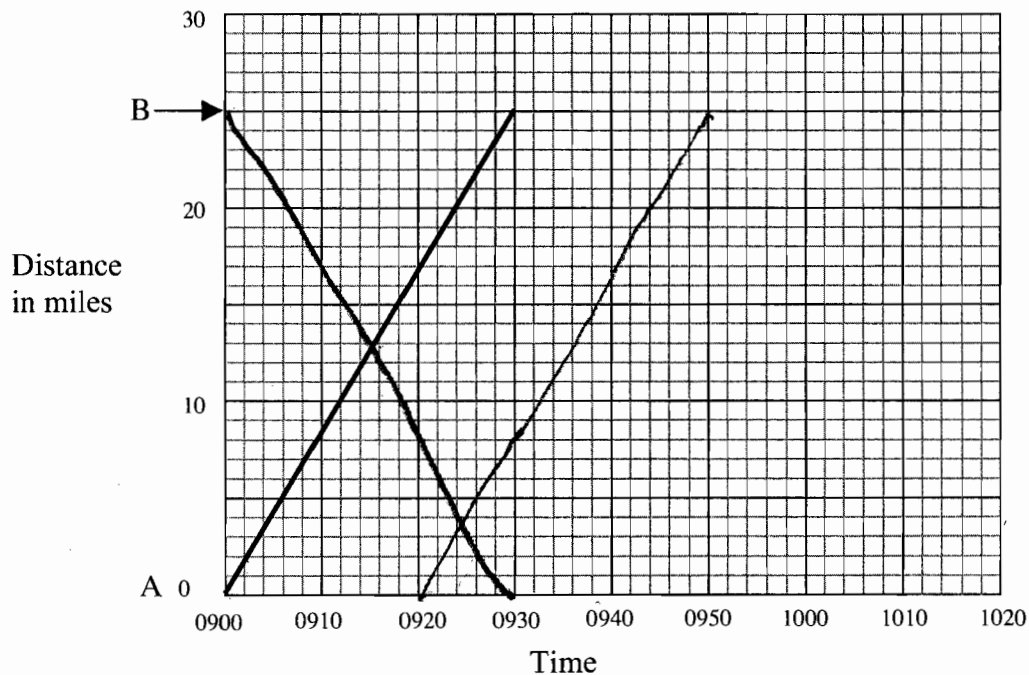
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- a. How far is it from City A to City B? 25 miles
- b. How long does the bus journey take? 30 minutes



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?

14 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?

one

Explain how you figured it out.

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 minutes



# Buses

# S4

This problem gives you the chance to:

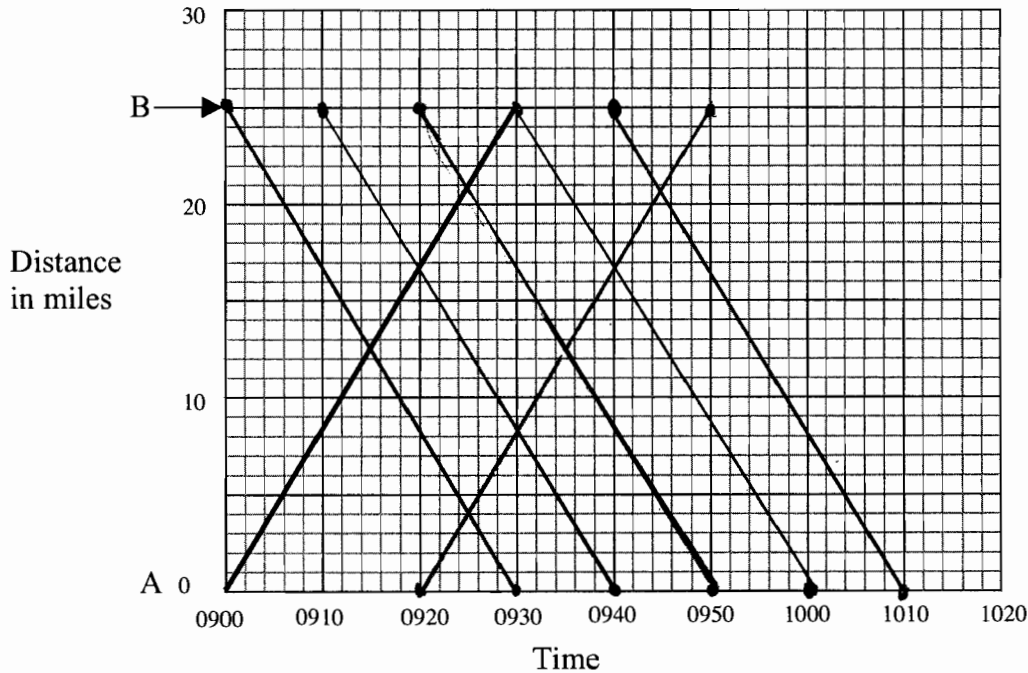
- interpret and use a travel graph

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? about 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?

5

Explain how you figured it out.

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

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

22 miles

# Buses

# S5

This problem gives you the chance to:

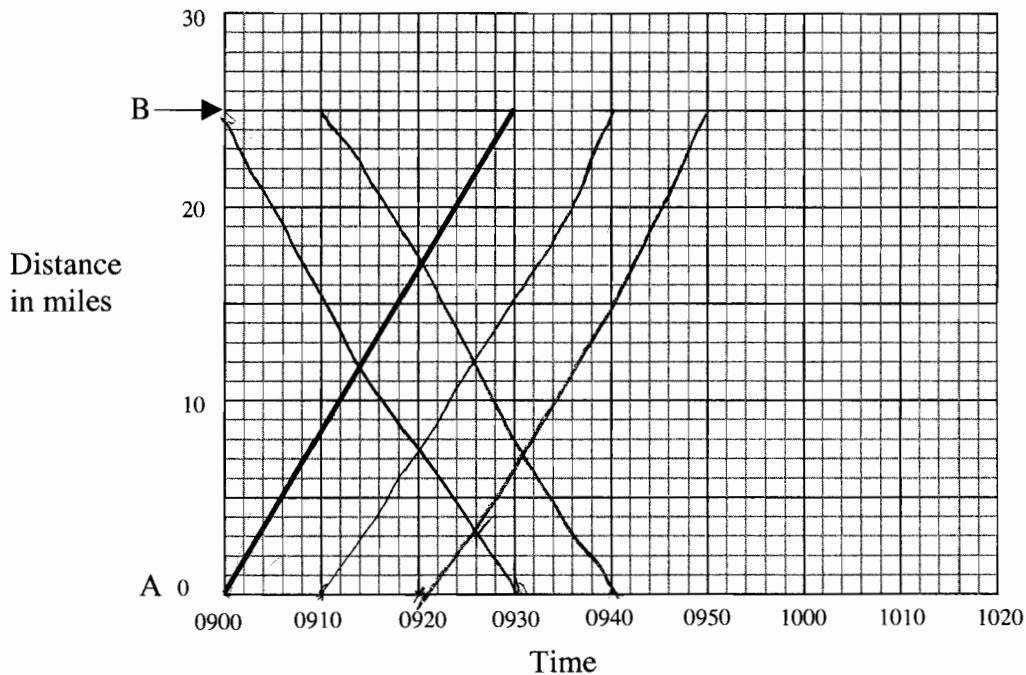
- interpret and use a travel graph

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? 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?

2

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?

12 miles

# Buses

# S6

This problem gives you the chance to:

- interpret and use a travel graph

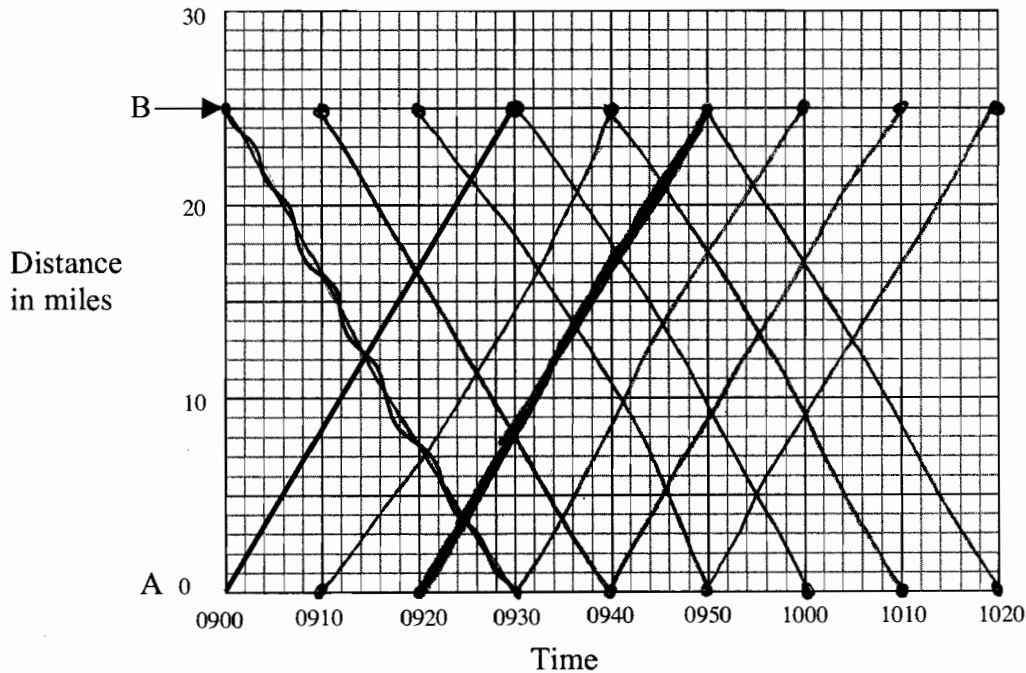
The diagram below is a distance-time graph.

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? 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?

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

# S7

This problem gives you the chance to:

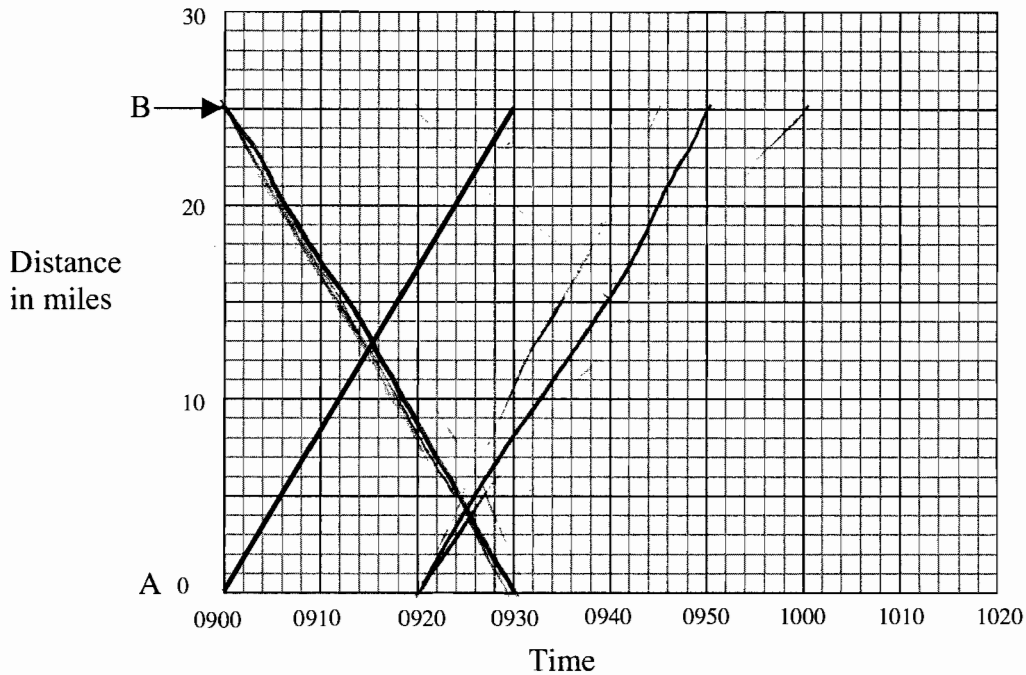
- interpret and use a travel graph

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? 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?

2

Explain how you figured it out.

The buses leave every 10 min.

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

15 miles



# Buses

# S8

This problem gives you the chance to:

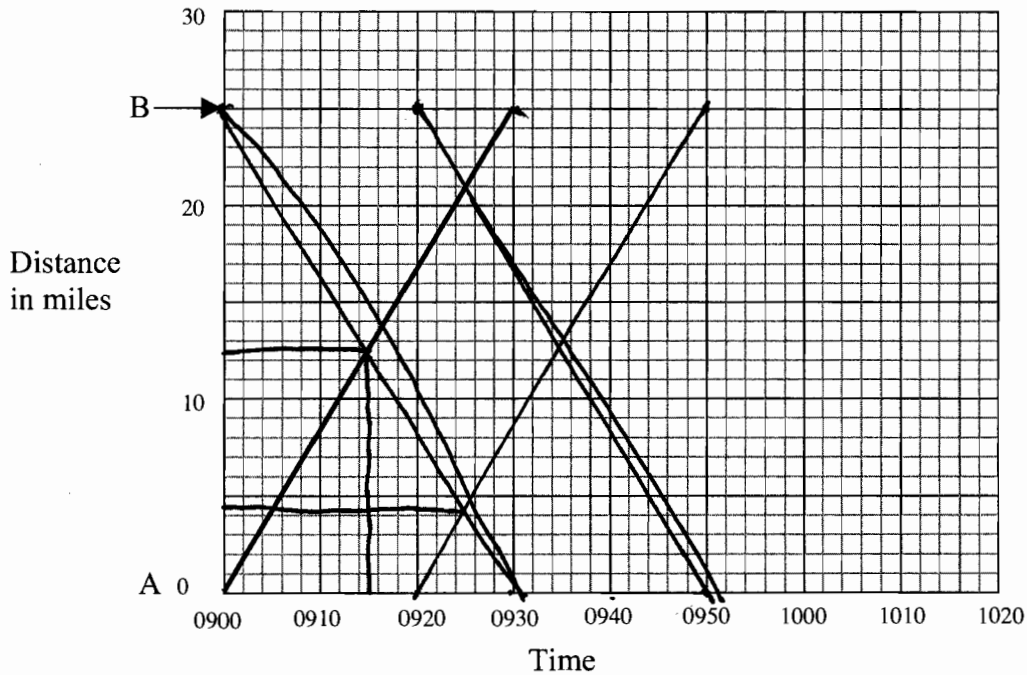
- interpret and use a travel graph

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? 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?

2

Explain how you figured it out.

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

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

21 miles

# Buses

# S9

This problem gives you the chance to:

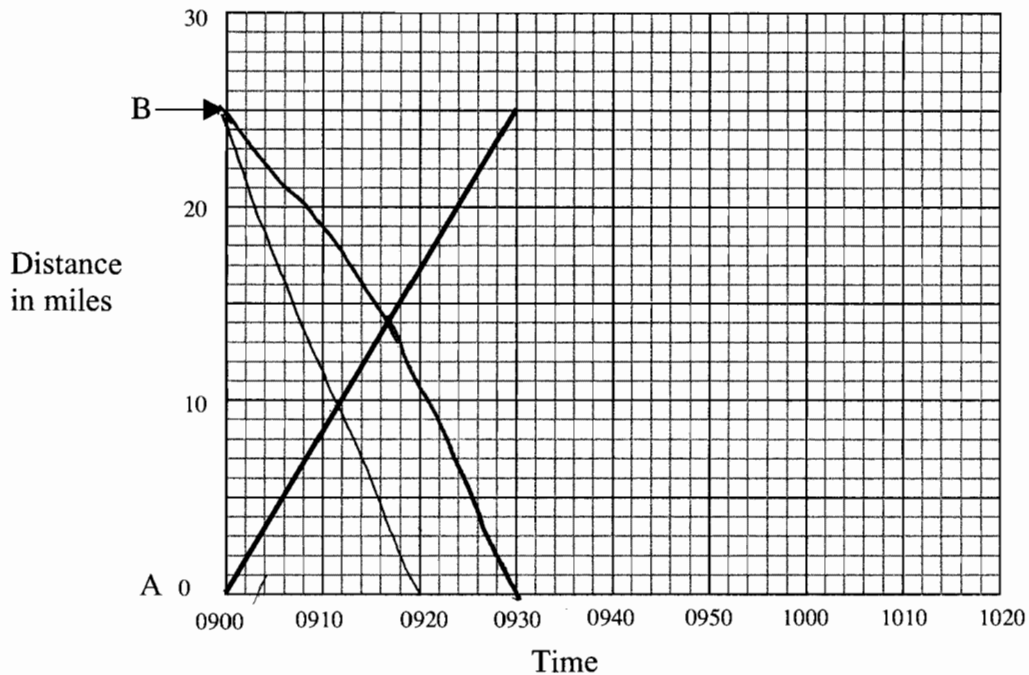
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- a. How far is it from City A to City B? 25 miles
- b. How long does the bus journey take? 30 minutes



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?

5

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

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

15 miles

# Buses

# S10

This problem gives you the chance to:

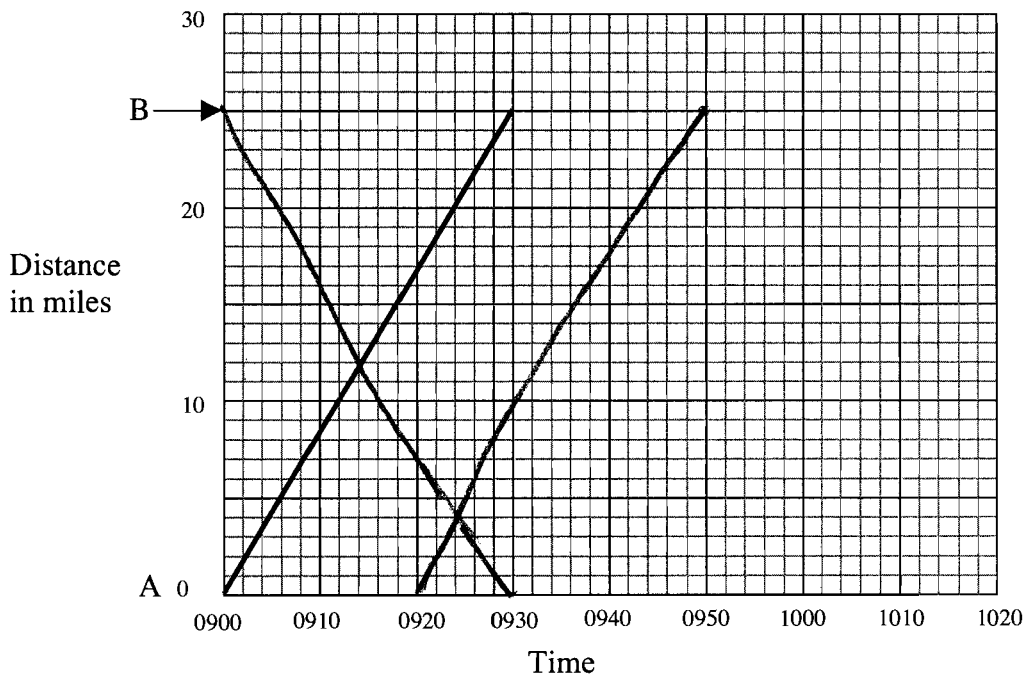
- interpret and use a travel graph

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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?

5

Explain how you figured it out.

b/c theres 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?

4