



Repeating Events - set samples - paper 1

1. Three train services pass through Waverley. The East Coast Freight arrives every 6 minutes, the Cross-Country arrives every 8 minutes, and the Southern Local arrives every 20 minutes.

If all three trains arrive at Waverley exactly at 12:00pm, how many trains in total will pass through Waverley from 12:30pm to 1:00pm, inclusive?

ans _____

2. Four train services pass through Euston. The Intercity Fast arrives every 4 minutes, the Airport Express arrives every 6 minutes, the Northern Express arrives every 10 minutes, and the Cross-Country arrives every 15 minutes.

If all four trains arrive at Euston exactly at 11:00am, how many trains in total will pass through Euston from 12:00pm to 12:20pm, inclusive?

ans _____

3. Four train services pass through Euston. The Cross-Country arrives every 4 minutes, the Airport Express arrives every 12 minutes, the Regional Flyer arrives every 15 minutes, and the Northern Express arrives every 20 minutes.

If all four trains arrive at Euston exactly at 1:00pm, how many trains in total will pass through Euston from 2:00pm to 2:30pm, inclusive?

ans _____



Repeating Events - set samples - Answers

1. East Coast Freight (every 6 mins): 12:30, 12:36, 12:42, 12:48, 12:54, 1:00 (6 trains)
Cross-Country (every 8 mins): 12:32, 12:40, 12:48, 12:56 (4 trains)
Southern Local (every 20 mins): 12:40, 1:00 (2 trains)

Total trains: $6 + 4 + 2 = 12$
Answer: 12
2. Intercity Fast (every 4 mins): 12:00, 12:04, 12:08, 12:12, 12:16, 12:20 (6 trains)
Airport Express (every 6 mins): 12:00, 12:06, 12:12, 12:18 (4 trains)
Northern Express (every 10 mins): 12:00, 12:10, 12:20 (3 trains)
Cross-Country (every 15 mins): 12:00, 12:15 (2 trains)

Total trains: $6 + 4 + 3 + 2 = 15$
Answer: 15
3. Cross-Country (every 4 mins): 2:00, 2:04, 2:08, 2:12, 2:16, 2:20, 2:24, 2:28 (8 trains)
Airport Express (every 12 mins): 2:00, 2:12, 2:24 (3 trains)
Regional Flyer (every 15 mins): 2:00, 2:15, 2:30 (3 trains)
Northern Express (every 20 mins): 2:00, 2:20 (2 trains)

Total trains: $8 + 3 + 3 + 2 = 16$
Answer: 16