Problem solving with addition and subtraction - answers

1.

Step 1 **Read and understand the problem.**	You're buying cable for your speaker system. You need one piece 3-metres long and another piece 7-metres long. If you buy a 15-metre roll, how much cable will you have left?
Step 2 **Work out what calculations you need to do.**	This involves addition and subtraction. Add together the 2 lengths you need and then take that amount from the 15 m roll.
Step 3 **Carry out the calculations and answer the problem.**	Lengths needed: 3 + 7 = 10 m. Roll length is 15 m, so 15 - 10 = 5 m. There would be 5 m left.
Step 4 **Check your answer works.**	Check by adding the lengths you need to what is left: 3 + 7 + 5 = 15 m. The answer is correct.

2.

Step 1 **Read and understand the problem.**	The coach journey to your friend's home town will take 2 hours 30 minutes. You always allow 1 hour to get from your home to the coach station. Coaches depart every hour, on the hour. Your friend will meet you at 12.30 pm. When should you leave home?
Step 2 **Work out what calculations you need to do.**	You could work out your total journey time and then work backwards from 12.30 pm to find the time you'd need to leave. Or you could work backwards in stages to find what time you need to leave home. First work back from the length of coach journey (2 hours 30 minutes). Then take off the hour for travelling from home to the coach station.
Step 3 **Carry out the calculations and answer the problem,**	12.30 pm - 2 h 30 m = 10 am 10 am - 1 hour = 9 am You'd need to leave home at 9 am.
Step 4 **Check your answer works.**	Reverse the calculation by working forwards: 9 am + 1 hour = 10 am 10 am + 2 hours 30 minutes = 12.30 pm The answer is correct.