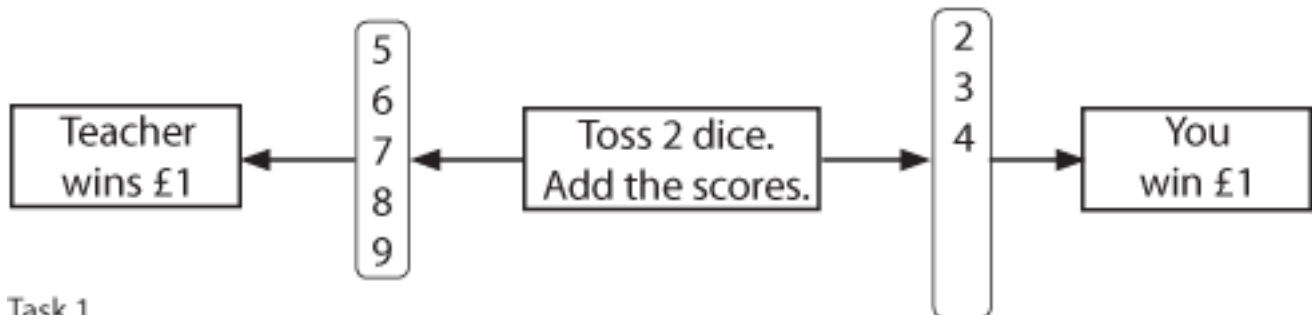


## SAMPLE from Topic 11 "How Likely Is It"

### E1: Beat the teacher



#### Task 1

Play this game several times.  
 Explain how you can tell that the game is not fair.  
 Who is more likely to win?

#### Task 2

Copy and complete this table of equally likely outcomes:

Total score	Outcomes
2	(1,1)
3	(1,2) (2,1)
4	
5	
6	
7	
8	
9	
10	
11	
12	

There should be 36 outcomes altogether.

#### Task 3

Work out the probability of getting each score.

#### Task 4

Work out the probability of the teacher winning.

• Check your answers.



Letmewin

Star Challenge **10** **10**

Correct game and explanation = 2 stars

Devise a version of "Beat the Teacher" which is fair.  
 The probability of the Teacher winning must be  $\frac{1}{2}$   
 and the probability of you winning must be  $\frac{1}{2}$   
 Show how you know that your game is fair.

• Show your game to your teacher.