

SIX CLASSIC JOURNEY AND CLOCK PUZZLES, WITH ANSWERS

EASY TO HARD

6 PUZZLES

ANSWERS INCLUDED

Donkeys, trains, a rowing boat and three clocks. Six puzzles about getting somewhere and how long it takes, starting easy and finishing hard. They come from Amusements in Mathematics by Henry Ernest Dudeney, published in 1917, in his own words.

NO. 1 · EASY

DONKEY RIDING

During a visit to the seaside Tommy and Evangeline insisted on having a donkey race over the mile course on the sands. Mr. Dobson and some of his friends whom he had met on the beach acted as judges, but, as the donkeys were familiar acquaintances and declined to part company the whole way, a dead heat was unavoidable. However, the judges, being stationed at different points on the course, which was marked off in quarter-miles, noted the following results: the first three-quarters were run in six and three-quarter minutes, the first half-mile took the same time as the second half, and the third quarter was run in exactly the same time as the last quarter. From these results Mr. Dobson amused himself in discovering just how long it took those two donkeys to run the whole mile. Can you give the answer?

In plain English: The race is one mile, marked in quarters. The first three quarters take $6\frac{3}{4}$ minutes. The first half takes as long as the second half. The third quarter takes as long as the fourth. How long does the whole mile take?

NO. 2 · EASY

SIR EDWYN DE TUDOR

Sir Edwyn de Tudor was going to rescue his lady-love, the fair Isabella, who was held a captive by a neighbouring wicked baron. Sir Edwyn calculated that if he rode fifteen miles an hour he would arrive at the castle an hour too soon, while if he rode ten miles an hour he would get there just an hour too late. Now, it was of the first importance that he should arrive at the exact time appointed, in order that the rescue that he had planned should be a success, and the time of the tryst was five o'clock, when the captive lady would be taking her afternoon tea. The puzzle is to discover exactly how far Sir Edwyn de Tudor had to ride.

NO. 3 · MEDIUM

CROSSING THE STREAM

During a country ramble Mr. and Mrs. Softleigh found themselves in a pretty little dilemma. They had to cross a stream in a small boat which was capable of carrying only 150 lbs. weight. But Mr. Softleigh and his wife each weighed exactly 150 lbs., and each of their sons weighed 75 lbs. And then there was the dog, who could not be induced on any terms to swim. On the principle of "ladies first," they at once sent Mrs. Softleigh over; but this was a stupid oversight, because she had to come back again with the boat, so nothing was gained by that operation. How did they all succeed in getting across?

In plain English: The boat carries 150 lbs at most. Each parent weighs 150 lbs and each son 75 lbs. The dog will not swim, but is small enough to go in the boat with one of the boys. How do all five get across?

NO. 4 · MEDIUM

THE THREE CLOCKS

On Friday, April 1, 1898, three new clocks were all set going precisely at the same time, twelve noon. At noon on the following day it was found that clock A had kept perfect time, that clock B had gained exactly one minute, and that clock C had lost exactly one minute. Now, supposing that the clocks B and C had not been regulated, but all three allowed to go on as they had begun, and that they maintained the same rates of progress without stopping, on what date and at what time of day would all three pairs of hands again point at the same moment at twelve o'clock?

In plain English: Clock B gains a minute a day and clock C loses a minute a day. All three start at noon on 1 April 1898. When will all three next show twelve o'clock at the same moment?

NO. 5 · HARD

THE TWO TRAINS

I put this little question to a stationmaster, and his correct answer was so prompt that I am convinced there is no necessity to seek talented railway officials in America or elsewhere. Two trains start at the same time, one from London to Liverpool, the other from Liverpool to London. If they arrive at their destinations one hour and four hours respectively after passing one another, how much faster is one train running than the other?

In plain English: Two trains set off at the same moment from opposite ends of a line. After they pass each other, one takes 1 more hour to finish and the other takes 4 more hours. How many times faster is the quicker train?

NO. 6 · HARD

THE THREE VILLAGES

I set out the other day to ride in a motor-car from Acrefield to Butterford, but by mistake I took the road going via Cheesebury, which is nearer Acrefield than Butterford, and is twelve miles to the left of the direct road I should have travelled. After arriving at Butterford I found that I had gone thirty-five miles. What are the three distances between these villages, each being a whole number of miles? I may mention that the three roads are quite straight.

In plain English: A straight road runs from Acrefield to Butterford. Cheesebury is 12 miles off to one side of it, and closer to Acrefield. Going via Cheesebury is 35 miles. Every road is straight and every distance is a whole number of miles. How far apart are the villages?

All six are from [Amusements in Mathematics](#) (1917), which is in the public domain. The worked answers are our own.