

# Discussion Problems

## Step 1: Add and Subtract Integers

### National Curriculum Objectives:

Mathematics Year 6: (6C8) [Solve problems involving addition, subtraction, multiplication and division](#)

### About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 6 Four Operations](#) resources.

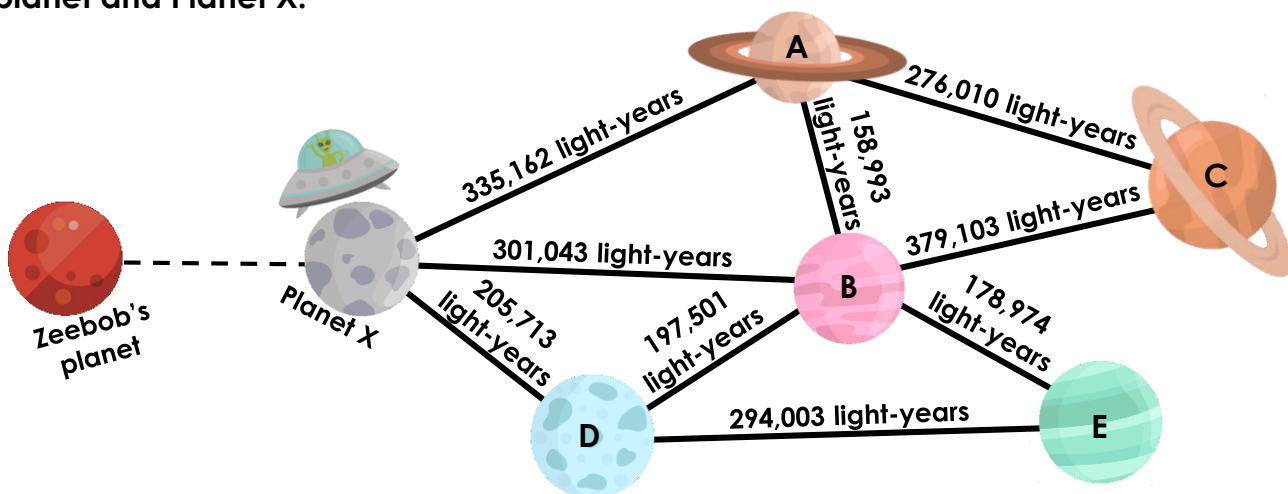
Did you like this resource? Don't forget to [review](#) it on our website.

# Add and Subtract Integers

1. Zeebob the alien wants to visit three different planets. The journeys he can make, and the distance between the planets in light-years, are shown on his map below.

Zeebob travels from his home planet and arrives on Planet X.

He then visits two more planets. Altogether, he has travelled a total of 957,487 light-years. Investigate how many light-years there might be between Zeebob's home planet and Planet X.

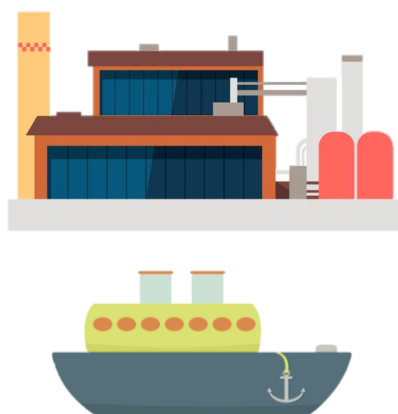


DP

2. A delivery company only has enough time to make three shipments of blocks for a client. They must collect shipments from two different factories each time.

Their ship can carry a maximum of 150,000 blocks per shipment.

Factory	Blocks produced
A	39,291
B	82,320
C	75,694
D	50,832
E	92,374
F	68,896
G	55,009



Explore various possible solutions so that at least 400,000 blocks are delivered within three shipments. How many blocks were there in each shipment? How many were shipped out altogether?

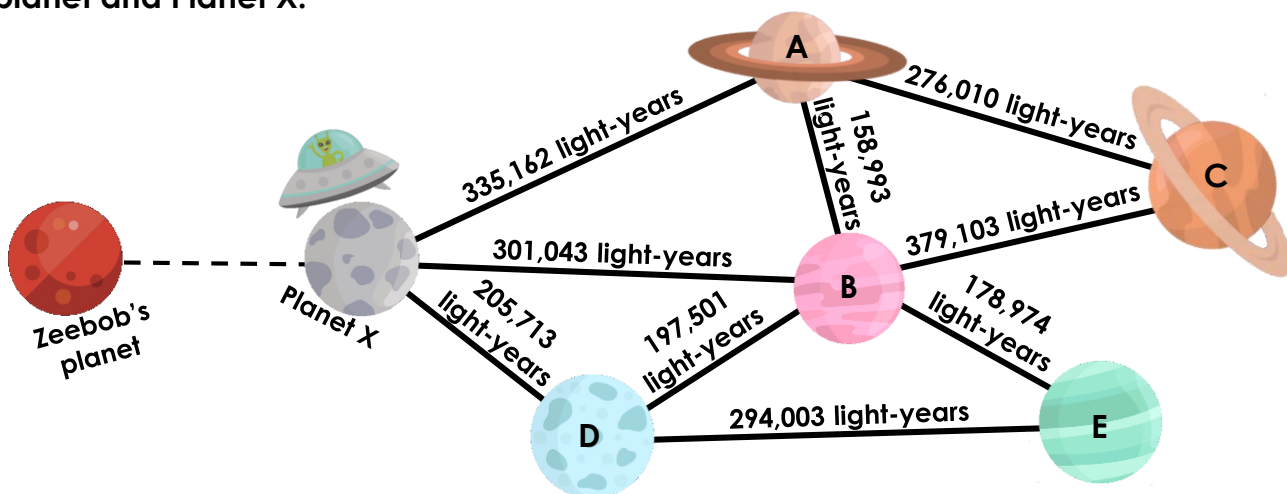
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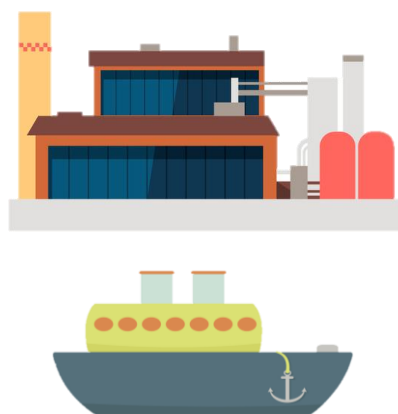
Various answers, for example: If Zeebob visits planets A and C, he will have travelled  $335,162 + 276,010 = 611,172$ .  $957,487 - 611,172 = 346,315$  light-years.

DP

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Various answers, for example: A and E in the first shipment (131,665 blocks), B and G in the second shipment (137,329 blocks) and C and F in the third shipment (144,590 blocks) giving a total of 413,584 blocks altogether.

DP