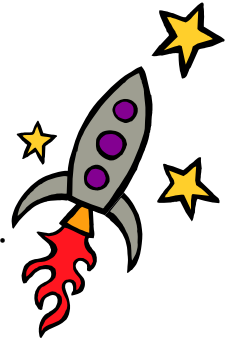


Planet Prism

Five, four, three, two, one, BLAST OFF! The vertex voyager shot off the launch pad in an enormous cloud of smoke. Spencer the spaceman and Terence the technician settled themselves into the cockpit for the long journey to Planet Prism.



Planet Prism got its name from the shape of its geographical features. The mountains are all different types of prisms. How many faces are there on a hexagonal prism?



The journey had gone so smoothly. Spencer and Terence were feeling very relaxed as Planet Prism began to appear in the distance. Suddenly there was an ear-splitting crunch and Trevor turned ghostly white. The voyager began to lose speed. The fuel stabilizer had become detached and was not able to function properly. Spencer watched in alarm as Terence worked frantically with his screwdrivers and spanners. "Can I do anything to help" offered Spencer.

"The timing device is broken," explained Terence, "so there is not enough fuel getting to the engine. If you can time me for a minute I can operate the system manually."



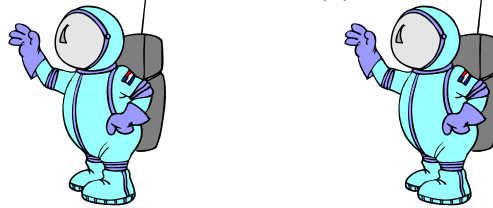
is not enough fuel getting to me for a minute I can operate

Spencer looked down at his watch and his heart sank to his moon boots. Both hands were stationary. They had stopped when the spacecraft took off.

Can you save Terence and Spencer by creating a timing device. Your timer needs to measure one minute as accurately as possible.

The vertex voyager struggled on the remainder of its journey and touched down on Planet Prism safely. Terence switched off the engine

and breathed a huge sigh of relief. The two travellers unfastened their safety harnesses and stretched after their long journey. They had never visited the planet before and were rather apprehensive about what lay in store for them.



Intrepid Terence pressed the door open button and the automatic doors glided open. As they took their first steps onto the prism shaped shingle three figures came bouncing towards them. As the figures got closer Terence and Spencer could see that they were friendly looking aliens bouncing along on springs. The larger of the three aliens introduced himself as Abdul and introduced his two friends Antonia and Archibald. He explained a hand shaking custom of Planet Prism.



When a group meets each person has to shake hands with all other members of the group. Can you work out how many handshakes there would be altogether?

(Possible strategies are acting out the problem, drawing or making lists)

Abdul, Antonia and Archibald took the two earthlings on a tour of Planet Prism. Terence and Spencer were awestruck by the size of some of the prism shaped mountains and the beautiful array of colours! As they passed Planet Prism Primary School Terence looked at the alienettes playing in the playground. He noticed that they had a variety of characteristics. Terence explained that their transporting springs could be purple, silver or black, their antennae could be capped with spheres, tetrahedral or cubes and their hair could be spiky, curly or straight.

What could Abdul look like?

How many different types of alien are there on Planet Prism.

Extension: What if the aliens arms could be furry, scaly, or bald?

Spencer asked Abdul what the population of Planet Prism was. Abdul did not give him a straight reply. Instead he gave him some clues.

1. It is a number greater than 100.
2. It is an even number.

3. It is a multiple of 3.
4. It has 3 digits.

Can you work out what the population of Planet Prism could be?
Here is a final clue that will reveal the exact population size.

E: The exact number is pallindromic and the digit sum is 15.

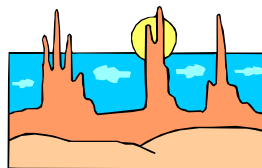
The five travelled back to the vertex voyager and Terence opened the rear flap and drove out the lunar buggy. Abdul had agreed to guide them on a tour of the far side of the planet to meet his cousins Aisha and Alan. They climbed into the buggy and fastened their seatbelts. Terence revved the engine and they sped away leaving tyre tracks in the prism sand. On the way they passed a fabulous forest where there were trees with leaves in every shade of green and every type of



triangle. What kind of triangles might they have seen?

A bit further on they passed a lunar beach. The shingle here was very distinct. Each stone was a three dimensional shape that had six faces.

Can you name the shapes of the stones and make them using apparatus? There are 3 different shapes. Can you name them all?

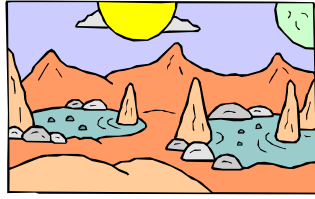


When they arrived at Aisha and Alan's home they were shocked to see that it was surrounded by an enormous crater. In their four wheeled drive lunar buggy they rushed across to check that everything was o.k. Alan and Aisha greeted them at the door.



"There is no time for any hand shakes" Alan blurted out. "We are in the middle of a disaster. The crater is expanding and our home is

subsiding into the ground. Please help us to escape with our 4 children!"



Terence rose to the challenge.

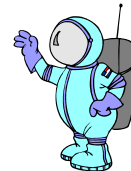
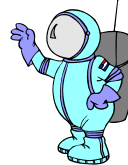
"We have got no time to spare," he commanded. "We need to make a plan and fast!" The Lunar buggy can only travel over tricky terrain with four passengers including the driver.

Alan interjected. "My alienettes must be with Aisha or myself at all times."

Terrence added, "The only people licensed to drive the lunar buggy are Spencer and myself."

Can you work out the fewest journeys needed to carry them all to safety?

Eventually the eleven were all safely away from the crater. Alan and Aisha had arranged to stay with some friends until they could find suitable accommodation.



Terence, Spencer, Abdul, Archibald and Antonia waved as they set off on their return journey to the spaceship. During the journey Spencer finished his film taking the pictures he needed for his research. When they arrived back at the spaceship Spencer and Terrence stored the buggy in the underside of the vertex voyager and prepared for lift off. They thanked the three aliens for their hospitality and promised to beam them a message when they arrived home.

Five, four, three, two, one BLAST OFF!
The vertex voyager zoomed into space
prism sand in its wake.



leaving a trail of

Can you design an adventure for Spencer and Terrence's return journey home? It must include a problem for some of your friends to solve.