1. Four people need to cross a bridge. It's nighttime and pretty dark. There's only one flashlight; it's dangerous to cross the bridge without one. The bridge can only support to people at a time. Each person will take a different amount of time to cross the bridge: 1 min, 2 mins, 7 mins, and 10 mins. What is the shortest possible time for all four people to cross the bridge?

* Send the two fastest people (1 min and 2 min) across the bridge first.

Time taken: 2 minutes (because the time is determined by the slower person, which is 2 minutes).

* The fastest person (1 min) returns with the flashlight.

Time taken: 1 minute

* Send the two slowest people (7 min and 10 min) across the bridge together.

Time taken: 10 minutes (since the time is determined by the slower person, which is 10 minutes).

* The second fastest person (2 min) returns with the flashlight.

Time taken: 2 minutes.

* Finally, the two fastest people (1 min and 2 min) cross the bridge again.

Time taken: 2 minutes.

Total time taken = 2 + 1 + 10 + 2 + 2 = 17 minutes.

1. A man fell in a well. The well is 30 meters deep. a day, he can climb 4 meters, but he slips down 3 meters. How many days would he take to come out of the well?

* 27 days
* On the 26th day he will climb 26m and on the 27th day he will climb 4 meters getting him out.

1. If the time is 3:15 when you look at: what's the angle between the hour hand and the minute hand?

* The minute hand moves 360° in 60 minutes, so in one minute, it moves 360/60=6° per minute.
* The hour hand moves 360° in 12 hours, so it moves 360/12=30° per hour.
* In 60 minutes, the hour hand moves 30°, so in 15 minutes, it will move 15/60×30=7.5°.
* At 3 the hour hand will be at 90° at 3:15 the minute hand will be at 90° in those 15 minutes the hour hand moves by 7.5°. Thus, the angle between the 2 hands is 7.5°.

1. You have a glass of tomato soup. You have one other empty glass of a different size and shape. You have to give the soup to two children. How would you divide the soup into two glasses so that both of them are satisfied that they have got an equal share of the soup?

Ask one of them to divide the soup into two equal parts. Then allow the second one to choose his glass. Both of them were satisfied.

1. Three jars on a shelf contain apricots, pears, and a mixture of both. However, they have mislabeled the jars. You can pick any number of fruits from the jars to correctly label them. Then you must determine the minimum number of fruits necessary to choose from the jar for accurate labeling.

* Pick one fruit from the "mixed" jar:
  + If you pick an apricot from the "mixed" jar, it means this jar contains only apricots, because the "mixed" jar cannot actually contain a mixture.
  + If you pick a pear from the "mixed" jar, it means this jar contains only pears.
* Re-label the jars:
  + After you've identified the jar that contains only apricots or only pears, you can deduce the contents of the other two jars.
  + For example, if you picked an apricot from the "mixed" jar, it means the jar labeled "mixed" contains only apricots.
  + The jar labeled "apricots" must therefore contain a mix of apricots and pears (because it was mislabeled).
  + The jar labeled "pears" must contain only pears.