

## HOW CAN YOU MEASURE 9 MINUTES WITH 4 AND 7 MINUTE HOURGLASSES?

7 min



4 min



### Solution:

Step 1)

**At 0 minutes:** Start both hourglasses at the same time.

Step 2)

**At 4 minutes:** 4 minutes hourglass runs out and flips it. 7 minutes of the hourglass is left with 3 minutes.

Step 3)

**At 7 minutes:** 4 minutes hourglass is left with 1 minute. 7 minutes hourglass runs out and flips it.

Step 4)

**At 8 minutes:** 4 minutes hourglass runs out and 7 is filled with 6 minutes and 1 minute on the other side. Flip it as the sand is left within 1 minute.

Step 5)

**At 9 minutes:** 7 minutes hourglass becomes empty from the above side.

Hence we measured 9 minutes.