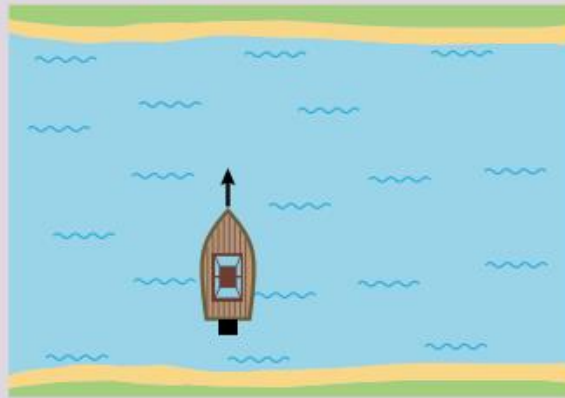
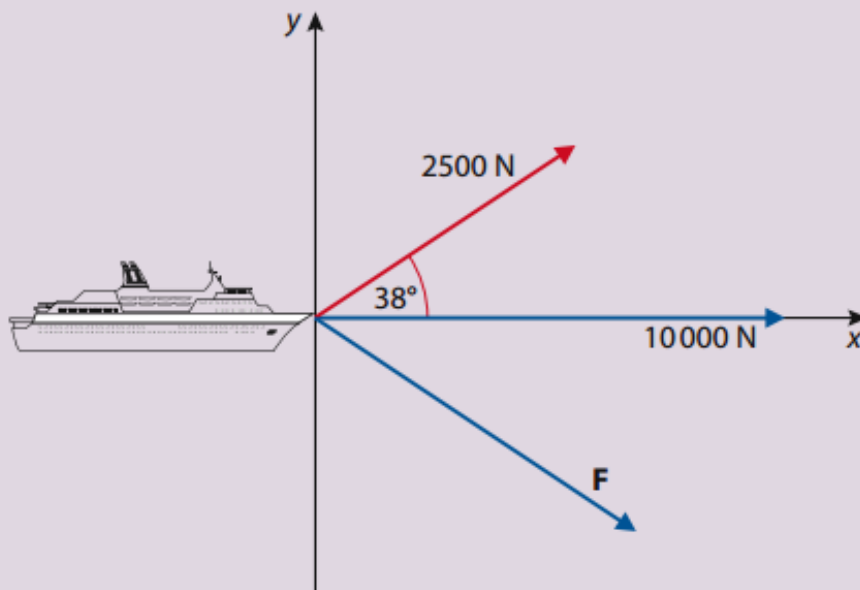


- 15** A motor boat with the power to steer across a river at 30 km/h is moving such that the bow is pointed in a northerly direction. The stream is moving eastward at 6 km/h. The river is 1 km wide. Where on the opposite side will the boat meet the land?



- 16** A force of 2500 N is applied at an angle of  $38^\circ$  to pull a 10 000 N ship in the direction given. What force **F** is needed to achieve this?



- 17** A boat is observed to have a bearing of  $072^\circ$ . The speed of the boat relative to still water is 40 km/h. Water is flowing directly south. The boat appears to be heading directly east.
- Express the velocity of the boat with respect to the water in component form.
  - Find the speed of the water stream and the true speed of the boat.

- 18** A 50 N weight is suspended by two strings as shown. Find the tensions **T** and **S** in the strings.

