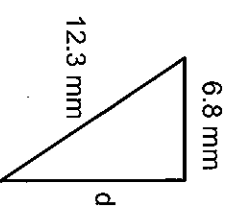
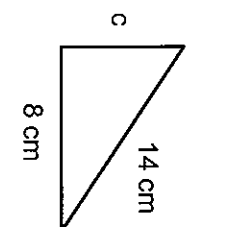
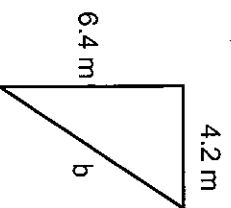
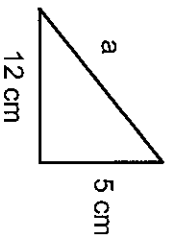


Pythagoras and Trigonometry Revision Sheet

1. Using Pythagoras, calculate the lengths of the following unknown sides.

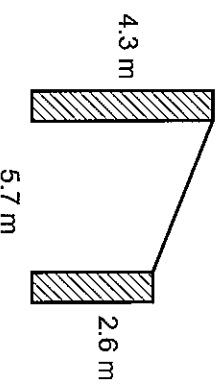


2. Using Pythagoras, solve the following problems.

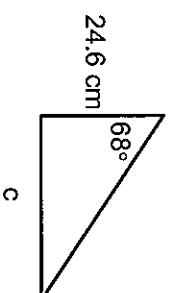
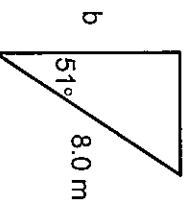
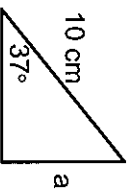
- a) A 7.5 m ladder is leaning against a wall. The base of the ladder is 0.95 m from the wall.

- i) Draw a diagram to represent this situation.
ii) Calculate the height of the wall

- b) A length of wire is fixed between two poles. The height of the poles are 4.3 m and 2.6 m and the poles are 5.7 m apart. What length of wire is required?



3. Using trigonometry, calculate the lengths of the following unknown sides

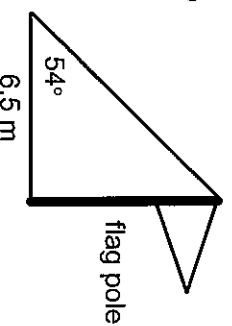


4. Using Trigonometry, solve the following problems.

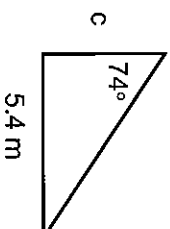
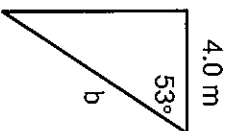
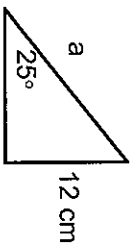
- a) A 3.70 m ladder leaning against a wall forms a 65° with the floor.

- i) Draw a diagram to represent this situation.
ii) Calculate the height of the wall

- b) A student is attempting to find the height of the school flag pole. He measures the angle to the top as 54° while standing 6.5 m from the base of the pole. What is the height of the flag pole?

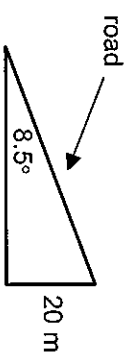


5. Using Trigonometry, calculate the lengths of the following unknown sides (harder problems)

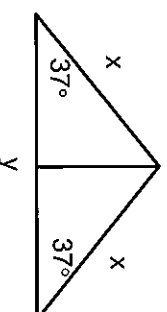


6. Using Trigonometry, solve the following problems

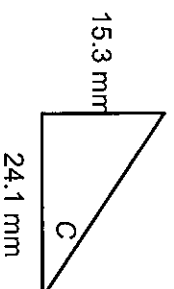
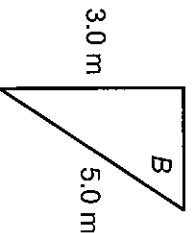
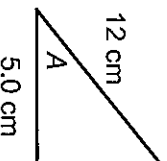
- a) A road has an angle of inclination of 8.5° to the horizontal. How far would it be necessary to walk to increase one's altitude by 20 m?



- b) The angle of pitch of a house roof is 37° . The vertical rise of the roof is 2.4 m. Find the length of the rafters x , and the width of the house y .

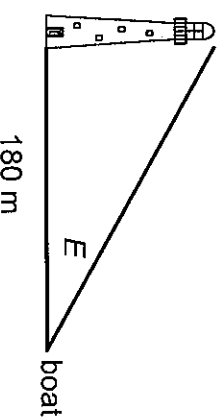


7. Using Trigonometry, calculate the sizes of the following unknown angles

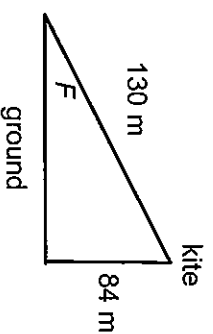


8. Using Trigonometry, solve the following problems

- a) A light-house built at sea level is 46 m high. A boat is situated 180 m away from the base 46 m of the light-house. Calculate the angle of elevation, E to the top of the light-house.



- b) A kite is flying 84 m directly above the ground and the amount of string let out is 130 m. Calculate the angle of elevation, F , to the kite.



9. A plane flies 230 km/hr due North. There is a wind blowing West at 85 km/hr.
- Draw a diagram to indicate the direction the plane will actually head because of the wind
 - Calculate the actual speed (to the nearest km/hr) that the plane would travel at on this heading.
 - What bearing from North is the plane actually heading because of the wind?