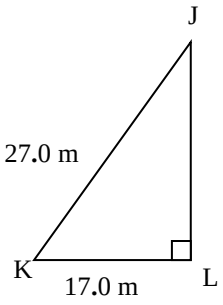
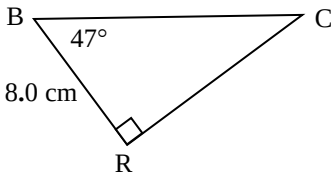
Solve each triangle.

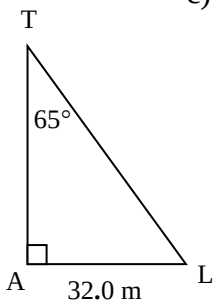
2a)



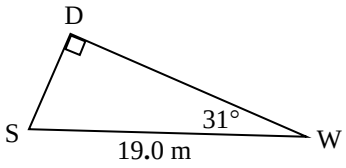
3a)



b)

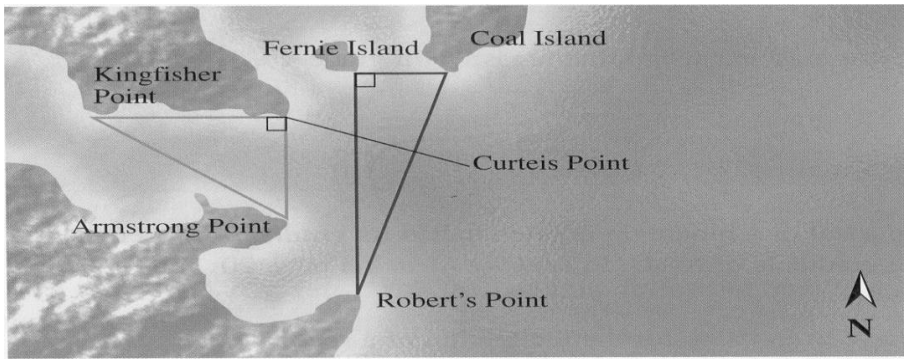


c)

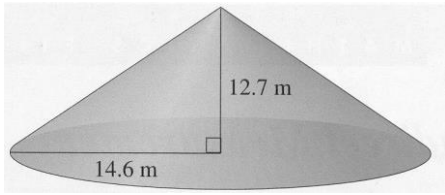


4. Solve each ΔXYZ, given ∠Y=90°, and the following lengths and angle measures.
   e) YZ = 32 mm, ∠X = 64° f) XY = 45 mm, YZ = 20 mm

13. Curteis Point is 800 m due north of Armstrong Point. A sailboat left Armstrong Point on a bearing of 307°. When it reached Kingfisher Point, which is due west of Curteis Point, it turned and sailed straight to Curteis Point. The sailboat then returned to Armstrong Point. How far did the boat travel?



14. Grain is stored in a cone-shaped pile. The dimensions of the cone are shown. Calculate the angle of inclination of the side of the cone.



16. A helicopter is often used for emergency medical transport.
    It flies from its base B, due west to a small community C. It picks up two patients and a medical attendant.
    The helicopter then flies on a bearing of 056° to a hospital H.
    The hospital is 85 km due north of the helicopter base.
    Determine how far the helicopter travels on each leg of its journey.
    a) from B to C b) from C to H

2. a) JL = 21.0 m, ∠K = 51°, ∠J = 39°
3. a) ∠C = 43°, BC = 11.7 cm, RC = 8.6 cm
   b) ∠L = 25°, TA = 14.9 m, TL = 35.3 m
   c) ∠S = 59°, DS = 9.8 m, DW = 16.3 m
4. e) ∠Z = 26°, XY = 16 mm, XZ = 36 mm
   f) XZ = 49 mm, ∠X = 24°, ∠Z = 66°

13. 3191 m 14. 41° 16a) 126 km b) 152 km