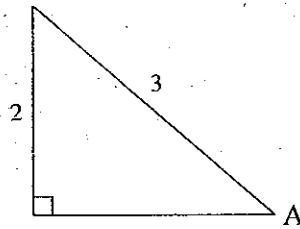


# Chapter 2

NO CALCULATOR

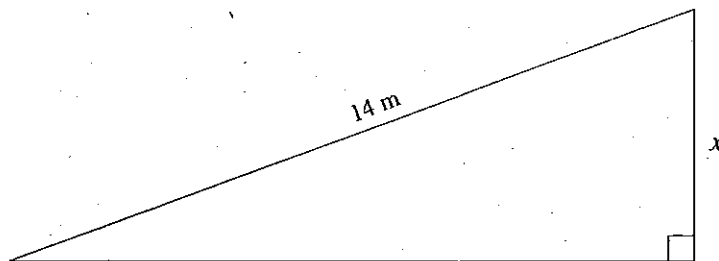
①

Determine the ratio of  $\cos A$ .

- A.  $\cos A = \frac{2}{3}$   
B.  $\cos A = \frac{\sqrt{5}}{3}$   
C.  $\cos A = \frac{\sqrt{13}}{3}$   
D.  $\cos A = \frac{3}{\sqrt{5}}$

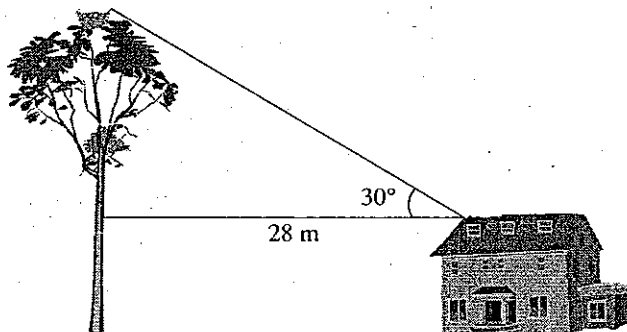
CALCULATOR PERMITTED

②

Using a protractor, measure one of the unknown angles and determine the length of side  $x$ .**Note: This diagram is drawn to scale.**

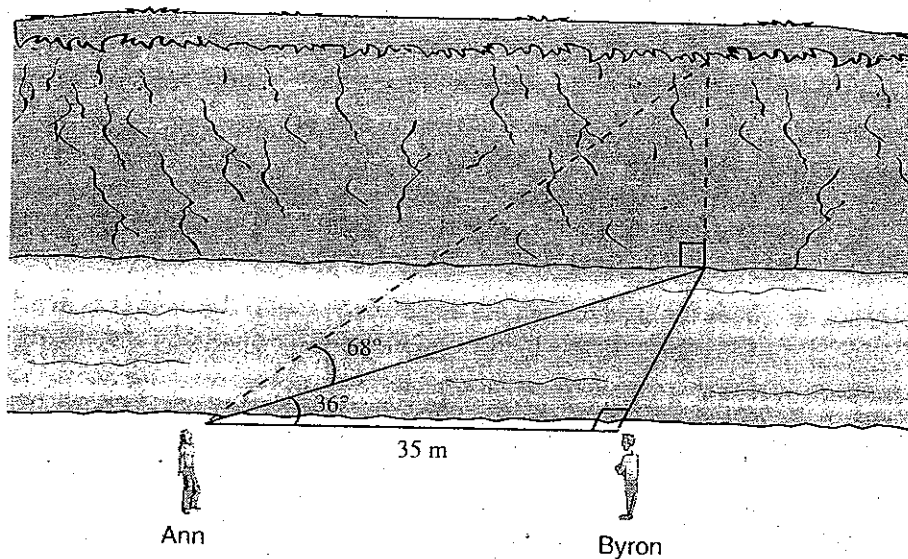
- A. 3.5 m  
B. 4.8 m  
C. 5.1 m  
D. 13.2 m

- ③ A 10 metre tall farmhouse is located 28.0 m away from a tree with an eagle's nest. The angle of elevation from the roof of the farmhouse to the eagle's nest is  $30^\circ$ .



What is the height of the eagle's nest?

- A. 16 m  
 B. 24 m  
 C. 26 m  
 D. 48 m
- ④ Ann and Byron positioned themselves 35 m apart on one side of a stream. Ann measured the angles, as shown below.



Calculate the height of the cliff on the other side of the stream.

- A. 17.5 m  
 B. 62.9 m  
 C. 70.1 m  
 D. 107.1 m

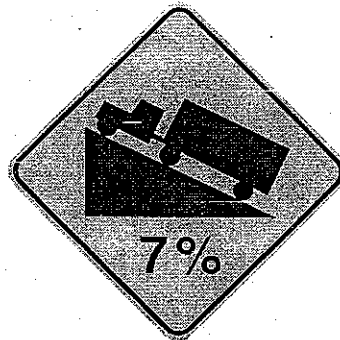
5. In  $\triangle ABC$ ,  $\angle C = 90^\circ$ ,  $AB = 17$  cm and  $AC = 15$  cm. Calculate the measure of  $\angle ABC$ .

- A.  $28^\circ$
- B.  $41^\circ$
- C.  $49^\circ$
- D.  $62^\circ$

6. The angle of elevation of the sun is  $15^\circ$ . How long is the shadow of a 64 m tall building?

- A. 17 m
- B. 66 m
- C. 239 m
- D. 247 m

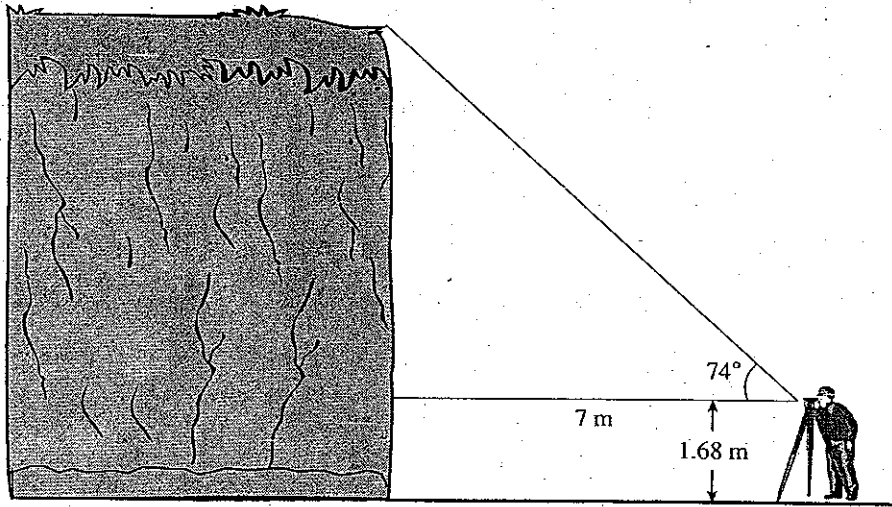
7. As Tracey is driving, she sees a sign telling her the road has a 7% grade (i.e., a rise of 7 metres for a horizontal change of 100 m). Which of the following expressions will calculate the angle between the road and the horizontal?



- A.  $\tan\left(\frac{7}{100}\right)$
- B.  $\sin\left(\frac{7}{100}\right)$
- C.  $\tan^{-1}\left(\frac{7}{100}\right)$
- D.  $\sin^{-1}\left(\frac{7}{100}\right)$

8

Mission's outdoor club collected the following data to determine the height of a cliff.



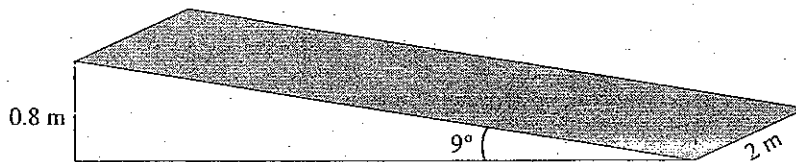
Calculate the height of the cliff.

- A. 3.7 m
- B. 8.4 m
- C. 24.4 m
- D. 26.1 m

Numerical Response

9

A ramp is set up using a rectangular piece of plywood (shaded region) as shown below.



Calculate the area of the plywood. Answer in square metres to one decimal place.

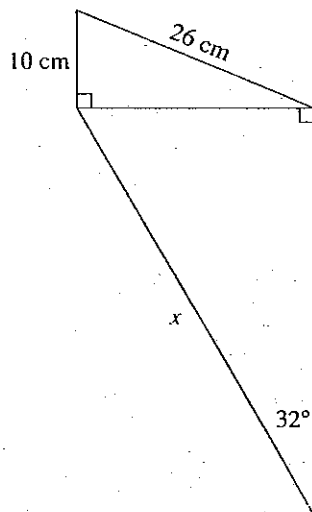
Record your answer neatly on the Answer Sheet.

Answer

00000.00

10

Calculate the length of side  $x$  on the diagram below. Answer to the nearest centimetre.



Record your answer neatly on the Answer Sheet.

Answer

00000.00

CHAPTER 2  
Answer Key

No Calc M/C

1. B

Calc M/C

2. B

3. C

4. D

5. D

6. C

7. C

8. D

Numerical Response

9.  $\overset{+}{\ominus} \square \square \square \square . \square \square$

10.  $\overset{+}{\ominus} \square \square \square \square . \square \square$