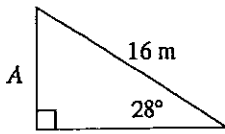


# Trigonometry Practice

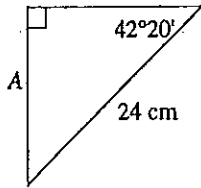
## Skill 8.1 Using sin to find side lengths

Find the unknown side:

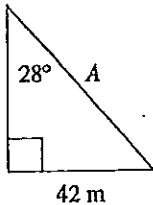
1



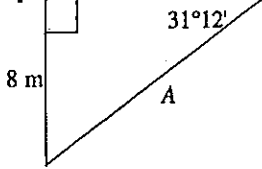
2



3



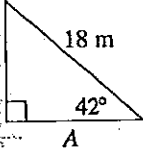
4



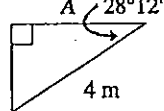
## Skill 8.2 Using cos to find side lengths

Find the unknown side:

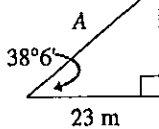
1



2

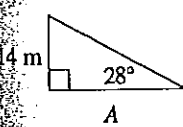


3

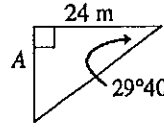


## Skill 8.3 Using tan to find side lengths

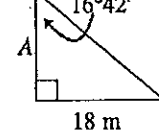
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2



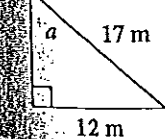
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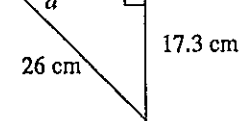
## Skill 8.4 Using sin to find an angle

Find the unknown angles, expressing the answer in decimal and degree/min form:

1



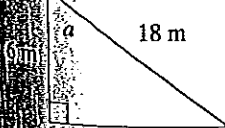
2



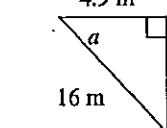
## Skill 8.5 Using cos to find an angle

Find the unknown angles, expressing the answer in decimal and degree/min form:

1



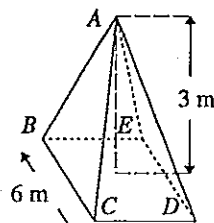
2



## Skill 8.9 Practical application in three dimensions

- Find the angle that the following planes make with the base in this rectangular-based pyramid.

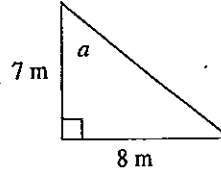
- $ABC$
- $ACD$



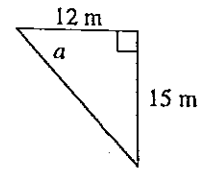
## Skill 8.6 Using tan to find an angle

Find the unknown angles, expressing the answer decimal and degree/min form:

1



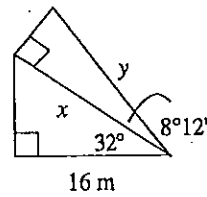
2



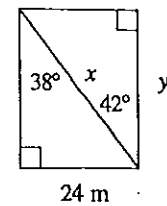
## Skill 8.7 Composite figures

Find the length of  $x$ , then  $y$ :

1

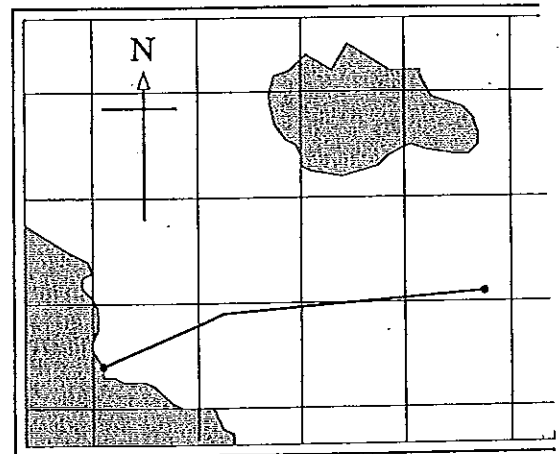


2



## Skill 8.8 Practical applications in two dimensions

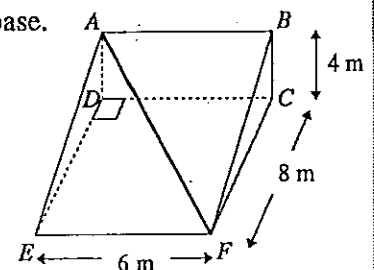
- A yacht sails on the bearing  $E23^\circ N$  for 10 km and then changes to sail on  $E5^\circ N$  for a further 20 km.



How far:

- east
  - north
- is the yacht from the starting position?
- A bushwalker standing 92 m from the base of a cliff measures the angle of elevation to the top of it at  $33.2^\circ$ . How tall is the cliff?

- In this wedge find the angle that the lines
  - $AE$
  - $AF$
 make with the base.



## Trigonometry

### Skill 8.1

- 1 7.51 m    2 16.16 cm    3 89.46 m    4 15.44 m

---

### Skill 8.2

- 1 13.38 m    2 3.53 m    3 29.23 m

### Skill 8.3

- 1 26.33 m    2 13.67 m    3 60.0 m

### Skill 8.4

- 1  $44.9^\circ, 44^\circ 54'$     2  $41.7^\circ, 41^\circ 43'$

### Skill 8.5

- 1  $70.5^\circ, 70^\circ 31'$     2  $72.17^\circ, 72^\circ 10'$

### Skill 8.6

- 1  $48.8^\circ, 48^\circ 49'$     2  $51.3^\circ, 51^\circ 20'$

### Skill 8.7

- 1  $x = 18.87 \text{ m}, y = 19.06 \text{ m}$   
2  $x = 38.98 \text{ m}, y = 28.97 \text{ m}$

### Skill 8.8

- 1 (a) 29.13 km                      (b) 5.65 km  
2 60.2 m

### Skill 8.9

- 1 (a)  $56.3^\circ$                               (b)  $45^\circ$   
2 (a)  $26.6^\circ$                               (b)  $21.8^\circ$