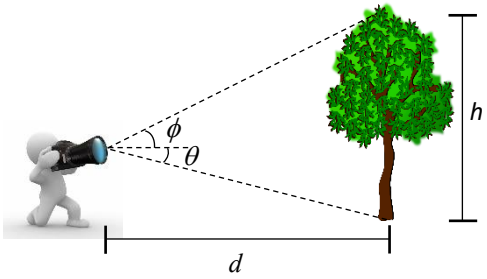
TB(3B) Ch.10 Applications of Trigonometry
Multiple Choice Questions

1. [16-17 Final Exam #11]

Find the inclination of a road with the gradient of $1:12$.

A. $0.00145°$
B. $0.0833°$
C. $4.76°$
D. $12°$

2. [16-17 Final Exam #22]



Refer to the figure, $d =$

A. $\dfrac{h}{\tan\theta + \tan\phi}$.

B. $\dfrac{h}{\dfrac{1}{\tan\theta} + \dfrac{1}{\tan\phi}}$.

C. $h(\tan\theta + \tan\phi)$.

D. $h(\dfrac{1}{\tan\theta} + \dfrac{1}{\tan\phi})$.

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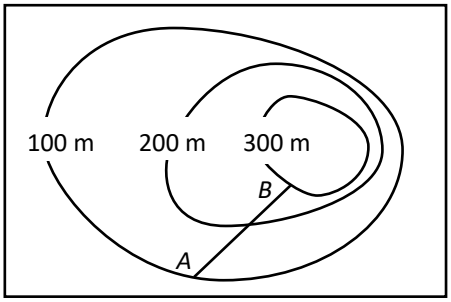
3. [17-18 Final Exam #9]

The figure shows part of a contour map drawn in the scale of 1 : 30 000. If road *AB* is 3 cm on the map, find the gradient of *AB*.



A. $\frac{2}{900}$

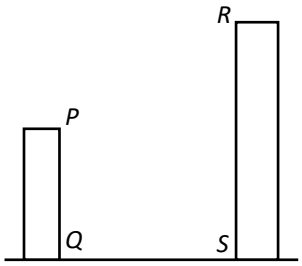
B. $\frac{1}{50}$

C. $\frac{1}{9}$

D. $\frac{2}{9}$

4. [17-18 Final Exam #20]

In the figure, *PQ* and *RS* are the heights of two buildings on the same level ground. If *PQ* = 45 m, *RS* = 65 m and the angle of depression of *P* from *R* is 55°, find the angle of elevation of *R* from *Q*.



A. 77.8°

B. 72.7°

C. 66.2°

D. 23.7°

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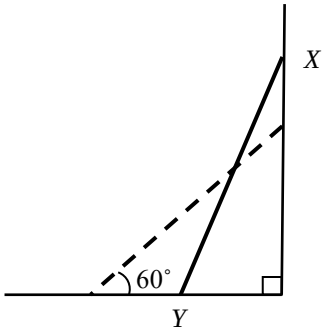
5. [17-18 Final Exam #21]

A ladder *XY* is leaning against a vertical wall such that the angle between the ladder and the ground is *a*. The ladder then slides down such that the distance between the bottom of ladder and the wall is doubled the original distance and it makes an angle of 60° with the ground. Find *a* correct to 3 significant figures.

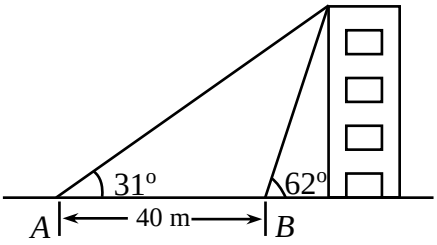


A. 64.3˚
B. 75.0˚
C. 75.5˚
D. 80.4˚

6. [18-19 Standardized Test 2, 9]

A and *B* are two points on the ground such that *AB* = 40 m. If the angle of elevation of the top of a building from *A* and *B* are 31° and 62° respectively, find the height of the building.

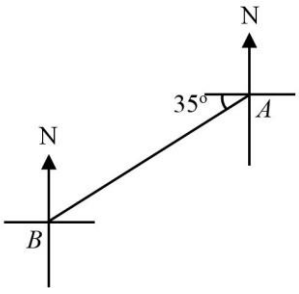
A. 35.3 m
B. 48.1 m
C. 58.8 m
D. 71.3 m



7. [20-21 Final Exam #10]

In the figure, the compass bearing of *A* from *B* is

A. E35˚N.
B. S55˚W.
C. W35˚S.
D. N55˚E.



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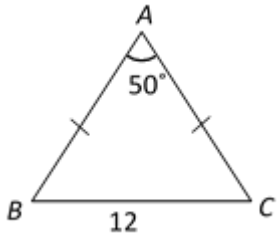
8. [20-21 Final Exam #19]

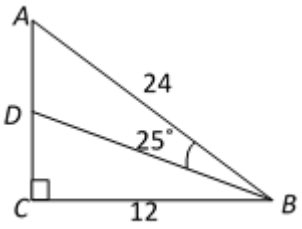
In the figure, Δ*ABC* is an isosceles triangle where *AB* = *AC*. ∠*BAC* = 50˚ and *BC* = 12 cm. Find the area of Δ*ABC*.



A. 154 cm^2
B. 77.2 cm^2
C. 60.4 cm^2
D. 30.2 cm^2

9. [20-21 Final Exam #20]

In the figure, *AB* and *DB* are inclined and *BC* is a horizontal line. *AB* = 24, *CB* = 12 and ∠*ABD* = 25˚. Find the gradient of *DB*.



A. 0.466
B. 0.5
C. 0.700
D. 2

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