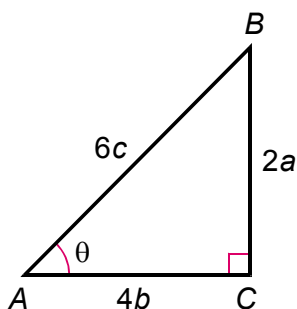


F.2 Mathematics

MC Exercise

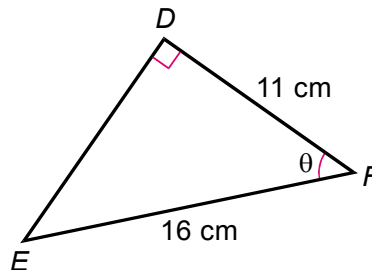
2B11 Trigonometric Ratios

1. In the figure, $\cos \theta =$

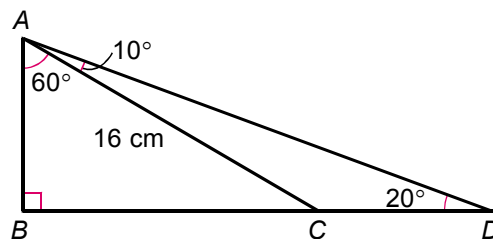


- A. $\frac{a}{2b}$.
 B. $\frac{2b}{3c}$.
 C. $\frac{a}{3c}$.
 D. $\frac{3c}{2b}$.
2. Find the value of $3\cos 50^\circ + 2\cos 20^\circ$, correct to 2 decimal places.
- A. 2.87
 B. 3.30
 C. 3.71
 D. 3.81
3. If $\cos \theta = \cos 25^\circ - \frac{1}{2}\cos 45^\circ$, find θ , correct to 3 significant figures.
- A. 0.553
 B. 0.729
 C. 43.2°
 D. 56.4°

4. Find θ in the figure, correct to 1 decimal place.

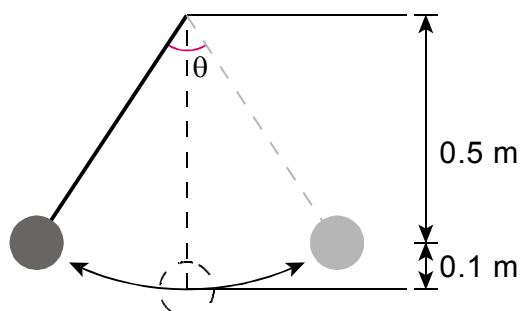


- A. 34.5°
 B. 43.4°
 C. 46.6°
 D. 55.5°
5. In the figure, BCD is a straight line. Find AD , correct to the nearest 0.1 cm.

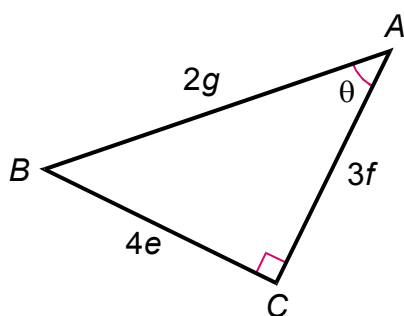


- A. 5.5 cm
 B. 8.2 cm
 C. 17.0 cm
 D. 23.4 cm

6. In the figure, a metallic ball is attached at one end of a rope and swing to the left and right. Find θ , correct to 3 significant figures.

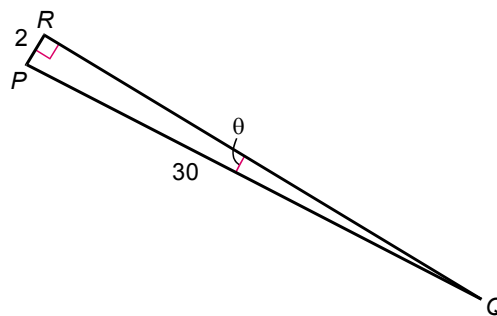


- A. 33.6°
 B. 67.1°
 C. 78.7°
 D. 157°
7. If $4\sin(2\theta - 50^\circ) = 3$, find θ , correct to 3 significant figures.
- A. 39.3°
 B. 44.3°
 C. 49.3°
 D. 54.3°
8. In the figure, $\sin \theta =$

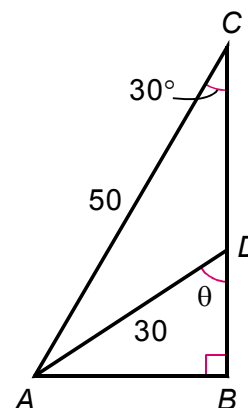


- A. $\frac{3f}{2g}$
 B. $\frac{2g}{3f}$
 C. $\frac{4e}{3f}$
 D. $\frac{2e}{g}$

9. Find θ in the figure, correct to 3 significant figures.

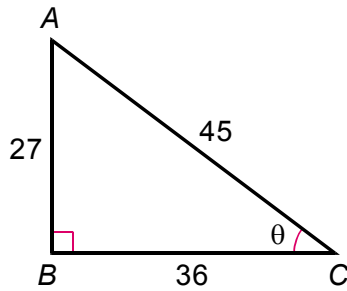


- A. 0.0667°
 B. 3.82°
 C. 4.24°
 D. 4.25°
10. In the figure, CDB is a straight line. Find θ , correct to 3 significant figures.



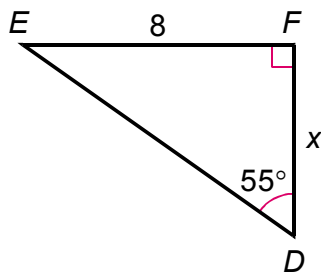
- A. 33.6°
 B. 34.8°
 C. 55.2°
 D. 56.4°
11. Find the value of $\tan 30^\circ - \frac{1}{2}\tan 50^\circ$, correct to 2 decimal places.
- A. 0.95
 B. -0.02
 C. -1.10
 D. -6.27

12. Find the value of $\tan \theta$ in the figure.



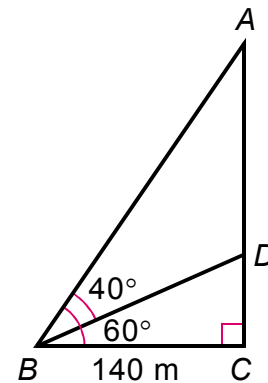
- A. $\frac{4}{3}$
- B. $\frac{3}{4}$
- C. $\frac{3}{5}$
- D. $\frac{4}{5}$

13. Find x in the figure, correct to 3 significant figures.



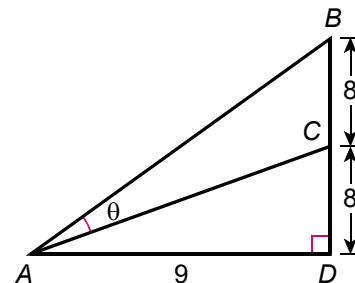
- A. 5.60
- B. 6.55
- C. 9.37
- D. 11.4

14. In the figure, $\triangle ABC$ is a right-angled triangle, where $\angle ABC = 60^\circ$, $\angle ABD = 40^\circ$. Find the length of AD . (Give your answer correct to the nearest 0.1 m.)



- A. 125.0 m
- B. 150.3 m
- C. 191.5 m
- D. 303.8 m

15. In the figure, BCD is a straight line. Find θ , correct to 3 significant figures.

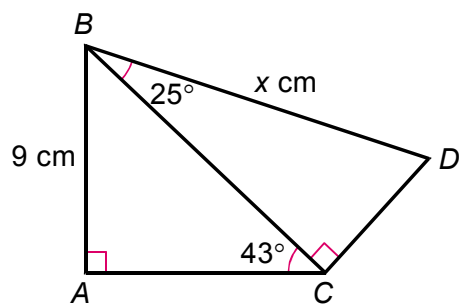


- A. 13.5°
- B. 19.0°
- C. 29.4°
- D. 33.6°

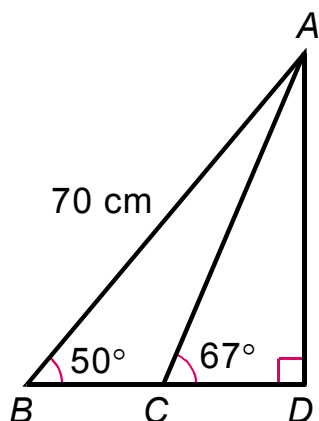
16. Find the value of $\tan 50^\circ - 6 \sin 35^\circ + 4 \cos 10^\circ$, correct to 2 decimal places.

- A. -1.06
- B. 0.69
- C. 1.69
- D. 1.82

17. Find x in the figure, correct to 3 significant figures.

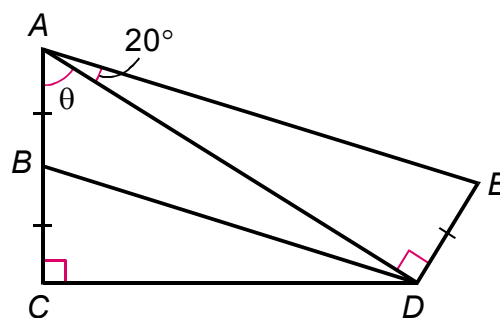


- A. 2.78
B. 5.56
C. 14.6
D. 22.8
18. In the figure, BCD is a straight line. $AB = 70$ cm, $\angle ABD = 50^\circ$, $\angle ACD = 67^\circ$ and $AD \perp BD$. Find the area of $\triangle ABC$. (Give your answer correct to 3 significant figures.)



- A. 926 cm^2
B. 777 cm^2
C. 722 cm^2
D. 596 cm^2

19. In the figure, ABC is a straight line. It is given that $AB = BC = DE$,
 $\angle ACD = \angle ADE = 90^\circ$,
 $\angle DAE = 20^\circ$ and $\angle CAD = \theta$. $\cos \theta =$



- A. $2 \tan 20^\circ$.
B. $\frac{\tan 20^\circ}{2}$.
C. $\frac{2}{\tan 20^\circ}$.
D. $\tan 40^\circ$.