



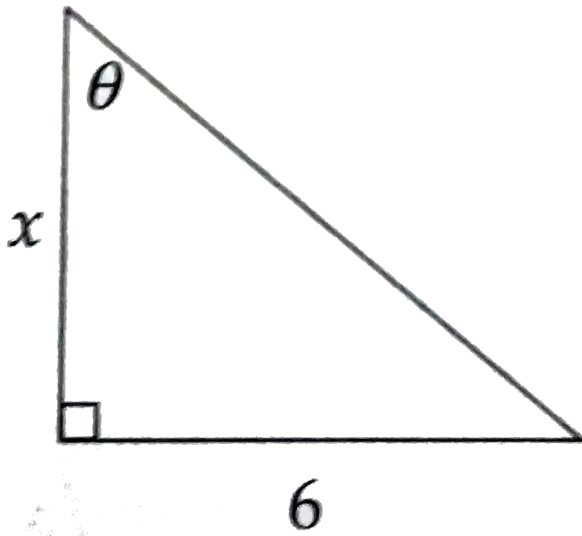
MATHS

BOOKS - KAPLAN INC MATHS (ENGLISH)

TRIGONOMETRY

Example

1. In the right triangle in Figure, If $\theta = 42^\circ$, what is the value of x ?



A. 4.9

B. 5.8

C. 6.7

D. 8.1

Answer: C



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$$2. 12\sqrt{3} - (8 \cos x) \left(\frac{3\sqrt{3}}{2} \cos x \right) =$$

A. $\sin^2 x$

B. $12\sqrt{3} \sin^2 x$

C. $12\sqrt{3} - 12\sqrt{3} \cos x$

D. $12\sqrt{3} \cos^2 x$

Answer: B



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3. If $\cos 2A = \frac{7}{19}$, what is the value of $\frac{1}{\cos^2 A - \sin^2 A}$?

A. 0.18

B. 0.37

C. 0.74

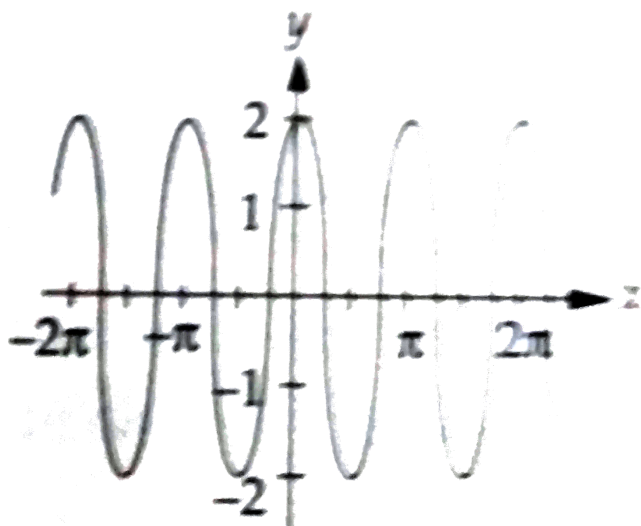
D. 2.71

Answer: D



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4. Which of the following is an equation of the graph shown in Figure



A. $y = \frac{1}{2} \sin 2x$

B. $y = \frac{1}{2} \cos 2x$

C. $y = 2 \sin\left(\frac{x}{2}\right)$

$$D. y = 2 \cos 2x$$

Answer: D



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5. If $6 \sin^2 \theta - \sin \theta = 1$ and $0 \leq \theta \leq \pi$, what is the value of $\sin \theta$?

A. $\frac{1}{6}$

B. $\frac{1}{3}$

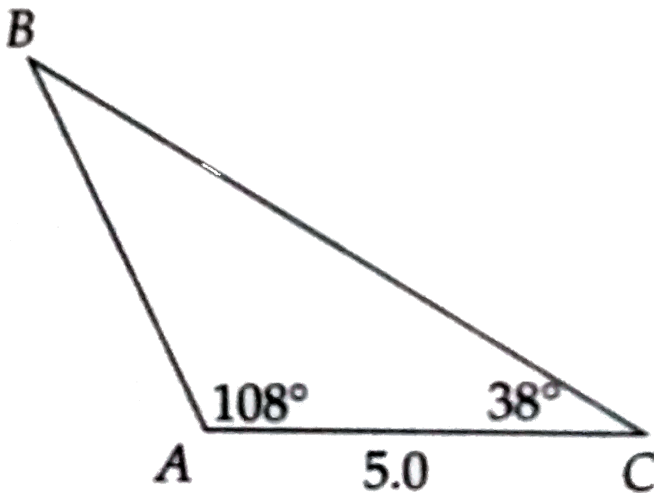
C. $\frac{1}{2}$

D. 19

Answer: C

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6. What is the length of side BC in Figure ?



A. 7.3

B. 7.7

C. 8.1

D. 8.5

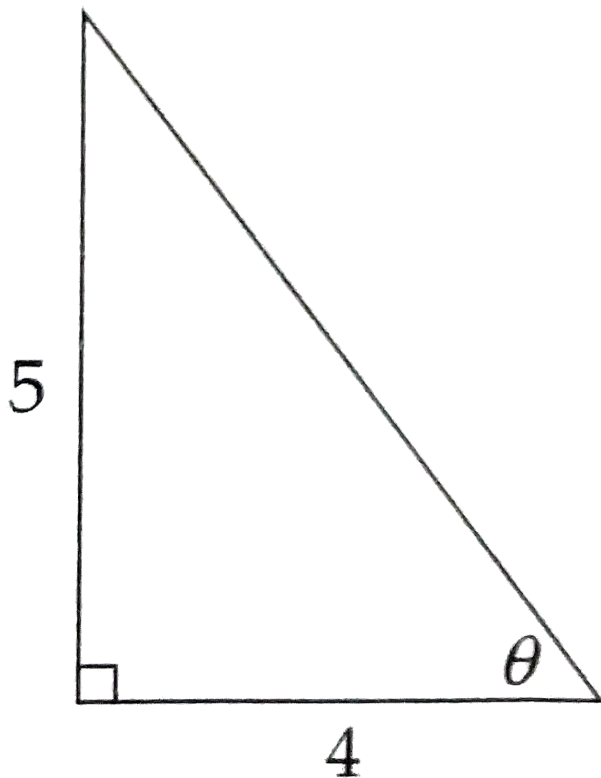
Answer: D



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Trigonometry Follow Up Test

1. What is the value of θ ?



A. 36.9°

B. 39.6°

C. 41.4°

D. 51.3°

Answer: D



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$$2. \sin^3 \theta + \sin \theta - \sin \theta \cos^2 \theta =$$

A. 0

B. $\sin \theta$

C. $\sin 2\theta$

D. $2 \sin^3 \theta$

Answer: D



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3. If $\sin \theta = \frac{1}{2} \cos \theta$, and $0 \leq \theta \leq \frac{\pi}{2}$, the value of $\frac{1}{2} \sin \theta$ is

A. 0.22

B. 0.25

C. 0.45

D. 0.50

Answer: A



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4. If θ is an acute angle for which $\tan^2 \theta = 6 \tan \theta - 9$, what is the degree measure of θ ?

A. 51.3

B. 60.0

C. 71.6

D. 79.7

Answer: C



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5. What is the y - coordinate of the point at which the graph of $y = 2 \sin x - \cos 2x$ intersects the y - axis ?

A. -2

B. -1

C. 0

D. 1

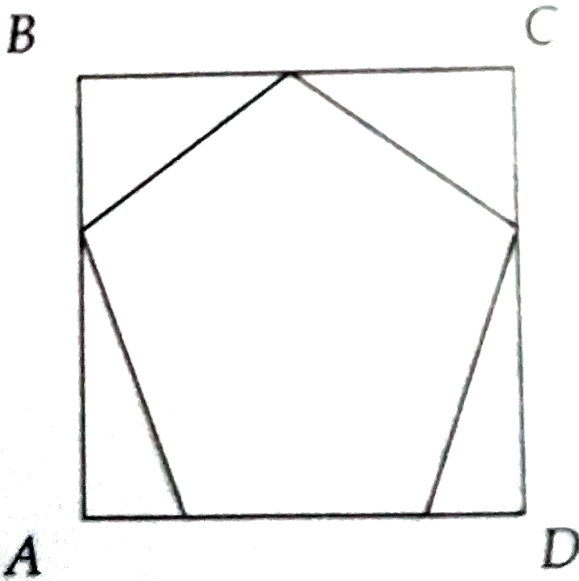
Answer: B



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6. A regular pentagon with all of its vertices on the sides of a rectangle. If $BC = \frac{1}{4}$, what is

the perimeter of the pentagon ?



A. 0.31

B. 0.62

C. 0.77

D. 0.80

Answer: C



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