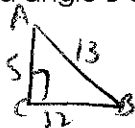


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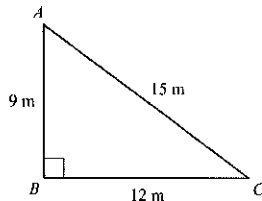
MULTIPLE CHOICE PRACTICE

- 1) In right triangle ABC, angle A and angle B are complementary angles. The value of $\cos A$ is $\frac{5}{13}$. What is the value of $\sin B$?



- a) $\frac{5}{13}$ b) $\frac{12}{13}$ c) $\frac{13}{12}$ d) $\frac{13}{5}$

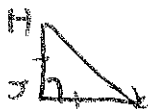
- 2) Triangle ABC is given below.



What is the value of $\cos A$?

- a) $\frac{3}{5}$ b) $\frac{3}{4}$ c) $\frac{4}{5}$ d) $\frac{5}{3}$

- 3) In right triangle HJK, $\angle J$ is a right angle and $\tan \angle H = 1$. Which statement about triangle HJK must be true?

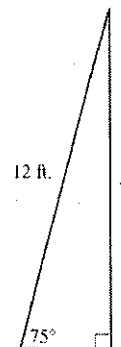


- a) $\sin \angle H = \frac{1}{2}$ b) $\sin \angle H = 1$ c) $\sin \angle H = \cos \angle H$ d) $\sin \angle H = 1 / \cos \angle H$

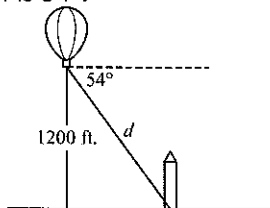
- 4) A 12 foot ladder is leaning against a building at a 75° angle with the ground.

Which can be used to find how high the ladder reaches up the side of the building?

- a) $\sin 75^\circ = \frac{12}{x}$ b) $\tan 75^\circ = \frac{12}{x}$
 c) $\cos 75^\circ = \frac{x}{12}$ d) $\sin 75^\circ = \frac{x}{12}$



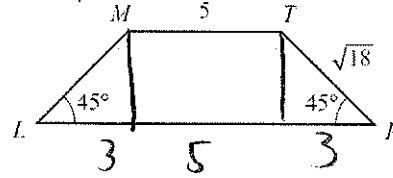
- 5) A hot air balloon is 1200 feet above the ground. The angle of depression from the basket of the hot-air balloon to the base of a monument is 54° .



Which equation can be used to find the distance, d , in feet, from the basket of the hotair balloon to the base of the monument?

- a) $\sin 54^\circ = \frac{d}{1200}$ b) $\sin 54^\circ = \frac{1200}{d}$ c) $\cos 54^\circ = \frac{d}{1200}$ d) $\cos 54^\circ = \frac{1200}{d}$

6) Quadrilateral LMTP is an isosceles trapezoid.



$$\cos 45^\circ = \frac{x}{\sqrt{18}}$$

What is the length of \overline{LP} ?

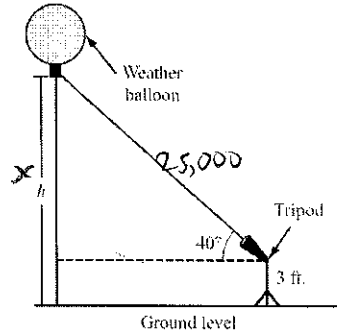
a) 10

b) 11

c) $5+2\sqrt{18}$

d) $5+6\sqrt{2}$

7) Bianca uses an angle-measuring device on a 3-foot tripod to find the height, h , of a weather balloon above ground level, as shown in this diagram.



$$\sin 40^\circ = \frac{x}{25,000}$$

$$x = 25,000 \cdot \sin 40^\circ$$

not drawn to scale

The balloon is at a 40° angle of elevation. A radio signal from the balloon tells Bianca that the distance between the tripod and the balloon is 25,000 feet.

Which expression represents the height, h , of the balloon above ground level?

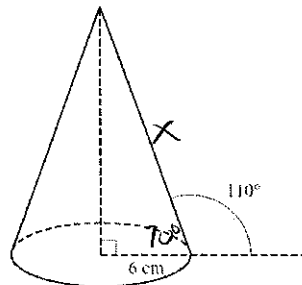
a) $25,000 \cdot \sin 40^\circ - 3$

b) $25,000 \cdot \sin 40^\circ + 3$

c) $\frac{25,000}{\sin 40^\circ} - 3$

d) $\frac{25,000}{\sin 40^\circ} + 3$

8) Use this diagram of a cone to answer the question.



$$\cos 70^\circ = \frac{6}{x}$$

$$x = \frac{6}{\cos 70^\circ}$$

The base of the cone has a radius of 6 cm. Which expression represents the slant height, in centimeters, of the cone?

a) $6 \cdot \cos 70^\circ$

b) $6 \cdot \cos 110^\circ$

c) $\frac{6}{\cos 70^\circ}$

d) $\frac{6}{\cos 110^\circ}$