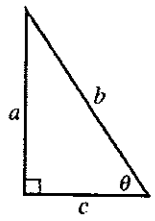
Right-angled trigonometry

Name: _____

All Multiple Choice

1



What does cos θ equal?

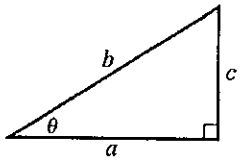
A $\frac{a}{b}$

B $\frac{c}{a}$

C $\frac{c}{b}$

D $\frac{a}{c}$

2



What does tan θ equal?

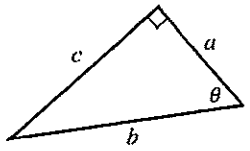
A $\frac{a}{b}$

B $\frac{c}{a}$

C $\frac{c}{b}$

D $\frac{a}{c}$

3



In this triangle what does sin θ equal?

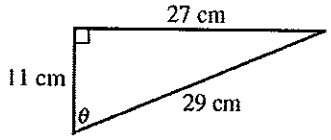
A $\frac{a}{b}$

B $\frac{c}{a}$

C $\frac{c}{b}$

D $\frac{a}{c}$

4



A trigonometric expression for this triangle could be:

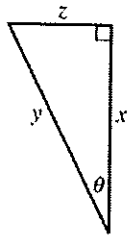
A $\tan\theta = \frac{27}{29}$

B $\cos\theta = \frac{29}{11}$

C $\sin\theta = \frac{11}{29}$

D $\cos\theta = \frac{11}{29}$

5



For the figure above, which statement is true?

A $\tan\theta = \frac{x}{z}$

B $\sin\theta = \frac{x}{y}$

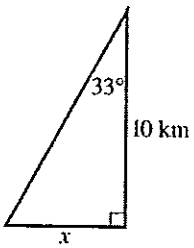
C $\cos\theta = \frac{x}{z}$

D $\sin\theta = \frac{z}{y}$

6 What is sin 58° rounded to 4 decimal places?

A 0.8480
B 0.8481
C 0.9928
D 0.9929

7 The length of x in kilometres can be found using which of the following calculations?



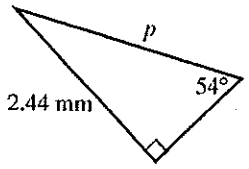
A $x = \frac{\sin 33°}{10}$

B $x = 10\cos 33°$

C $x = \frac{\cos 33°}{10}$

D $x = 10\tan 33°$

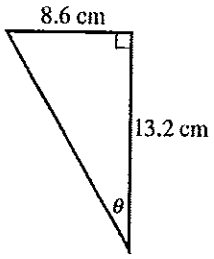
8



The value of p correct to 2 decimal places is:

A 3.02 mm
B 4.15 mm
C 1.97 mm
D 2.89 mm

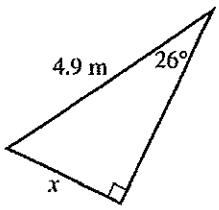
9



The value of θ accurate to the nearest degree is:

A 33°
B 35°
C 49°
D 38°

10



What does x equal?

A $\frac{4.9}{\sin 26°}$ m

B $4.9\cos 26°$ m

C $\frac{4.9}{\cos 26°}$ m

D $4.9\sin 26°$ m

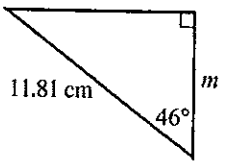
11 Which statement is false?

A $\sin 45° = \cos 45°$
B $\cos 30° = \sin 60°$
C $\cos 65° = \sin 25°$
D $\sin 50° = \cos 50°$

12 If $\cos \theta = 0.0349$, the value of θ to the nearest degree is:

A $2°$
B $79°$
C $88°$
D $77°$

13



Which of these trigonometric ratios would be used to find m?

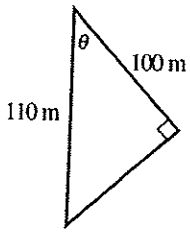
A $\tan 46° = \dfrac{11.81}{m}$

B $\cos 46° = \dfrac{m}{11.81}$

C $\sin 46° = \dfrac{m}{11.81}$

D $\tan 46° = \dfrac{m}{11.81}$

14



A trigonometric expression for this triangle could be:

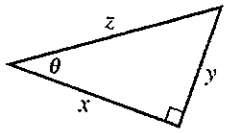
A $\tan \theta = \dfrac{100}{110}$

B $\sin \theta = \dfrac{110}{100}$

C $\tan \theta = \dfrac{110}{100}$

D $\cos \theta = \dfrac{100}{110}$

15



Which statement is true?

A $\sin \theta = \dfrac{x}{y}$

B $\cos \theta = \dfrac{x}{z}$

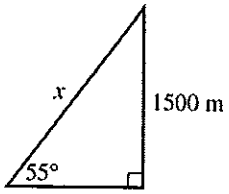
C $\sin \theta = \dfrac{z}{y}$

D $\cos \theta = \dfrac{y}{z}$

16 What is $\tan 11°$ rounded to 4 decimal places?

A 0.1943
B 0.1944
C 0.9816
D 0.9817

17 The length of x in metres can be found using which of the following calculations?



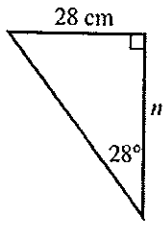
A $\dfrac{1500}{\tan 55°}$

B $\dfrac{1500}{\sin 55°}$

C $\dfrac{\cos 55°}{1500}$

D $\dfrac{1500}{\cos 55°}$

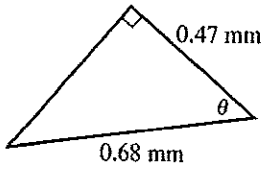
18



The value of n correct to 2 decimal places is:

A 13.14 cm
B 14.88 cm
C 31.71 cm
D 52.66 cm

19



The value of θ accurate to the nearest degree is:

A 35°
B 38°
C 44°
D 46°

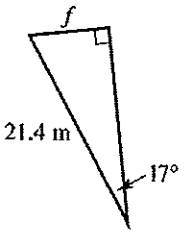
20 Which statement is TRUE?

A $\sin 90° = \cos 10°$
B $\sin 45° = \cos 55°$
C $\cos 65° = \sin 35°$
D $\sin 80° = \cos 10°$

21 If $\tan \theta = 0.24$, the value of θ to the nearest minute is:

A 76°07'
B 13°30'
C 76°11'
D 13°50'

22



Which of these trigonometric ratios would be used to find f?

A $\sin 17° = \dfrac{f}{21.4}$

B $\sin 17° = \dfrac{21.4}{f}$

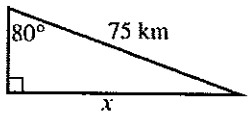
C $\cos 17° = \dfrac{21.4}{f}$

D $\tan 17° = \dfrac{f}{21.4}$

23 What is $\tan 4°$ rounded to 4 decimal places?

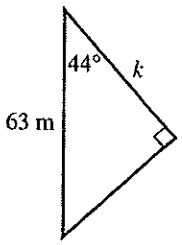
A 0.0699
B 0.9976
C 0.6992
D 0.6993

24 The length x in kilometres in the figure below can be found using which of the following calculations?



A $\dfrac{75}{\sin 80°}$
B $75 \cos 80°$
C $\dfrac{\cos 80°}{75}$
D $75 \sin 80°$

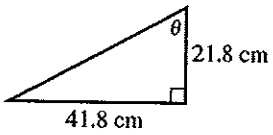
25



The value of k correct to 2 decimal places is:

A 45.32 m
B 58.65 m
C 87.58 m
D 43.76 m

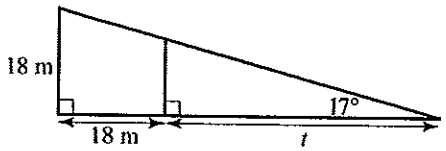
26



The value of θ accurate to the nearest degree is:

A 59°
B 47°
C 31°
D 62°

27



What does t equal?

A 55.03 m
B 50.83 m
C 40.88 m
D 58.88 m

28 What is S20°W as a true bearing?

A 180°T
B 20°T
C 220°T
D 200°T

29 What is 287°T as a compass bearing?

A N73°W
B N87°E
C S7°W
D S87°W

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ANSWERS TO TRIGONOMETRY

(1) C	(8) A	(15) B	(22) A	(29) A
(2) B	(9) A	(16) B	(23) A	
(3) C	(10) D	(17) B	(24) D	
(4) D	(11) D	(18) D	(25) A	
(5) D	(12) C	(19) D	(26) D	
(6) A	(13) B	(20) D	(27) C	
(7) D	(14) D	(21) B	(28) D	