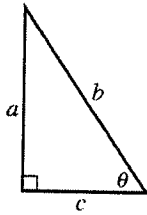


# Right-angled trigonometry

Name: \_\_\_\_\_

All Multiple Choice

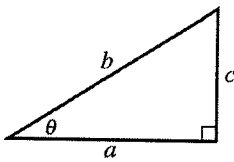
1



What does  $\cos \theta$  equal?

- A  $\frac{a}{b}$
- B  $\frac{c}{a}$
- C  $\frac{c}{b}$
- D  $\frac{a}{c}$

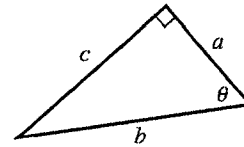
2



What does  $\tan \theta$  equal?

- A  $\frac{a}{b}$
- B  $\frac{c}{a}$
- C  $\frac{c}{b}$
- D  $\frac{a}{c}$

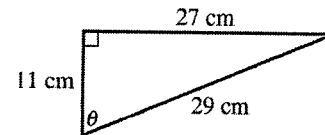
3



In this triangle what does  $\sin \theta$  equal?

- A  $\frac{a}{b}$
- B  $\frac{c}{a}$
- C  $\frac{c}{b}$
- D  $\frac{a}{c}$

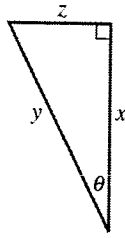
4



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



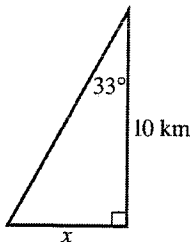
For the figure above, which statement is true?

- 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  $\sin 58^\circ$  rounded to 4 decimal places?

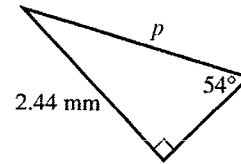
- A 0.8480  
 B 0.8481  
 C 0.9928  
 D 0.9929

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



- A  $x = \frac{\sin 33^\circ}{10}$   
 B  $x = 10 \cos 33^\circ$   
 C  $x = \frac{\cos 33^\circ}{10}$   
 D  $x = 10 \tan 33^\circ$

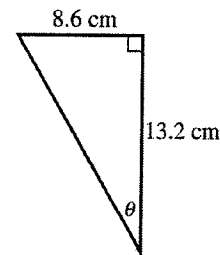
8



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

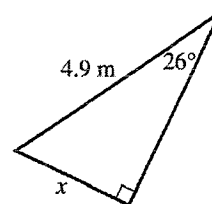
9



The value of  $\theta$  accurate to the nearest degree is:

- A  $33^\circ$   
 B  $35^\circ$   
 C  $49^\circ$   
 D  $38^\circ$

10



What does  $x$  equal?

- A  $\frac{4.9}{\sin 26^\circ} \text{ m}$   
 B  $4.9 \cos 26^\circ \text{ m}$   
 C  $\frac{4.9}{\cos 26^\circ} \text{ m}$   
 D  $4.9 \sin 26^\circ \text{ m}$

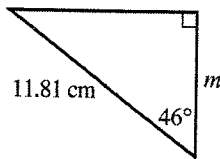
11 Which statement is false?

- A  $\sin 45^\circ = \cos 45^\circ$   
 B  $\cos 30^\circ = \sin 60^\circ$   
 C  $\cos 65^\circ = \sin 25^\circ$   
 D  $\sin 50^\circ = \cos 50^\circ$

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

A  $2^\circ$   
 B  $79^\circ$   
 C  $88^\circ$   
 D  $77^\circ$

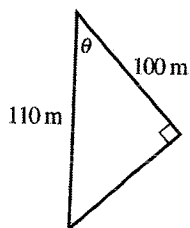
13



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

A  $\tan 46^\circ = \frac{11.81}{m}$   
 B  $\cos 46^\circ = \frac{m}{11.81}$   
 C  $\sin 46^\circ = \frac{m}{11.81}$   
 D  $\tan 46^\circ = \frac{m}{11.81}$

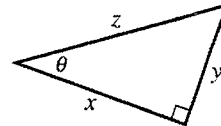
14



A trigonometric expression for this triangle could be:

A  $\tan \theta = \frac{100}{110}$   
 B  $\sin \theta = \frac{110}{100}$   
 C  $\tan \theta = \frac{110}{100}$   
 D  $\cos \theta = \frac{100}{110}$

15



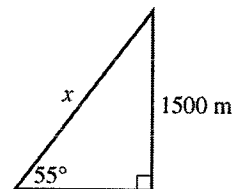
Which statement is true?

A  $\sin \theta = \frac{x}{y}$   
 B  $\cos \theta = \frac{x}{z}$   
 C  $\sin \theta = \frac{z}{y}$   
 D  $\cos \theta = \frac{y}{z}$

- 16 What is  $\tan 11^\circ$  rounded to 4 decimal places?

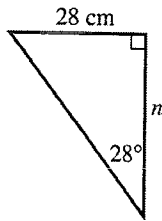
A 0.1943  
 B 0.1944  
 C 0.9816  
 D 0.9817

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



A  $\frac{1500}{\tan 55^\circ}$   
 B  $\frac{1500}{\sin 55^\circ}$   
 C  $\frac{\cos 55^\circ}{1500}$   
 D  $\frac{1500}{\cos 55^\circ}$

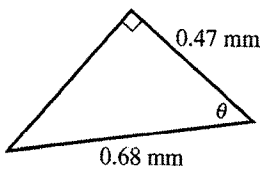
18



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  $\theta$  accurate to the nearest degree is:

- A  $35^\circ$
- B  $38^\circ$
- C  $44^\circ$
- D  $46^\circ$

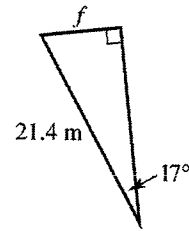
20 Which statement is TRUE?

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

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

- A  $76^\circ 07'$
- B  $13^\circ 30'$
- C  $76^\circ 11'$
- D  $13^\circ 50'$

22

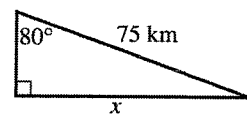


Which of these trigonometric ratios would be used to find  $f$ ?

- A  $\sin 17^\circ = \frac{f}{21.4}$
- B  $\sin 17^\circ = \frac{21.4}{f}$
- C  $\cos 17^\circ = \frac{21.4}{f}$
- D  $\tan 17^\circ = \frac{f}{21.4}$

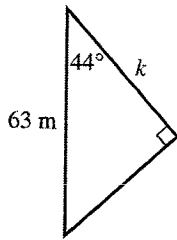
23 What is  $\tan 4^\circ$  rounded to 4 decimal places?

- 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  $\frac{75}{\sin 80^\circ}$
- B  $75 \cos 80^\circ$
- C  $\frac{\cos 80^\circ}{75}$
- D  $75 \sin 80^\circ$

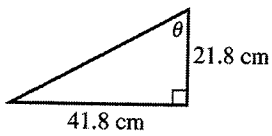
25



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

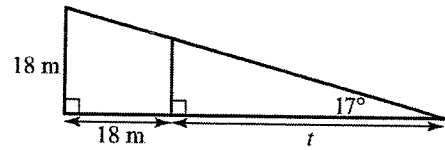
26



The value of  $\theta$  accurate to the nearest degree is:

- A  $59^\circ$
- B  $47^\circ$
- C  $31^\circ$
- D  $62^\circ$

27



What does  $t$  equal?

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

28 What is  $S20^\circ W$  as a true bearing?

- A  $180^\circ T$
- B  $20^\circ T$
- C  $220^\circ T$
- D  $200^\circ T$

29 What is  $287^\circ T$  as a compass bearing?

- A  $N73^\circ W$
- B  $N87^\circ E$
- C  $S7^\circ W$
- D  $S87^\circ W$

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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