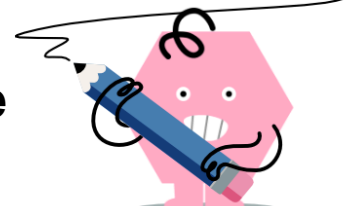




Trigonometry Fundamentals - Practice



1

$p=7$
 $z=21$

Solve for the ratio of lengths of line p over line z

A	3.75	B	0.13
C	3	D	0.33
E	0.27	F	0.93

$\frac{p}{z} = ?$

2

$d=?$
 $c=12$

Solve for the length of line d

A	0	B	5
C	14	D	12
E	2	F	3

$\frac{d}{c} = 0.25$

3

$r=?$
 $p=6$

Solve for the length of line r

A	4	B	10
C	9	D	13
E	12	F	14

$\frac{p}{r} = 0.5$

4

$d=11$
 $m=44$

Solve for the ratio of lengths of line d over line m

A	6.67	B	0.05
C	0.25	D	0.75
E	2.22	F	1.18

$\frac{d}{m} = ?$

5

$d=?$
 $c=22$

Solve for the length of line d

A	26	B	10
C	9	D	11
E	14	F	15

$\frac{d}{c} = 0.5$

6

$d=10$
 $c=?$

Solve for the length of line c

A	40	B	9
C	38	D	6
E	7	F	35

$\frac{d}{c} = 0.25$

7

$m=11$
 $x=33$

Solve for the ratio of lengths of line m over line x

A	1.13	B	0.27
C	0.73	D	0.33
E	2.14	F	1.07

$\frac{m}{x} = ?$

8

$y=?$
 $b=14$

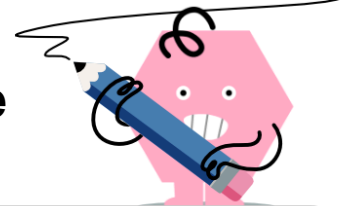
Solve for the length of line y

A	7	B	13
C	14	D	16
E	11	F	10

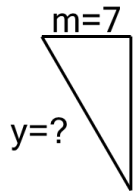
$\frac{y}{b} = 0.5$



Trigonometry Fundamentals - Practice



9



$$\frac{m}{y} = 0.5$$

Solve for the length of line y

A	4	B	18
C	14	D	16
E	11	F	7

10 Select the definition of this trigonometry ratio

Cosine

A	$opp \times adj$	B	$\frac{adj}{adj}$
C	$\frac{opp}{hyp}$	D	$\frac{hyp}{opp}$
E	$\frac{adj}{hyp}$	F	$opp \times opp$

11 Select the trigonometry ratio that this is the definition of

$$\frac{adj}{hyp}$$

A	Tangent	B	Cosine
C	Sine		

12 How would you calculate the angle using arc notation?

α has a cos of 0.707

A	$\alpha = \frac{1}{\cos^{-1}(0.707)}$	B	$\alpha = \cos(0.707) - 1$
C	$\alpha = \text{acos}(0.707)$	D	$\alpha = \frac{1}{\text{acos}(0.707)}$

13 How would you calculate the angle using -1 notation?

α has a sin of 0.669

A	$\alpha = \sin(0.669) - 1$	B	$\alpha = \sin^{-1}(0.669)$
C	$\alpha = \frac{1}{\text{asin}(0.669)}$	D	$\alpha = \frac{1}{\sin^{-1}(0.669)}$

14 How would you calculate the angle, using arc notation?

$$\tan(\alpha) = 0.7$$

A	$\alpha = \tan(0.7) - 1$	B	$\alpha = \frac{1}{\text{atan}(0.7)}$
C	$\alpha = \frac{1}{\tan^{-1}(0.7)}$	D	$\alpha = \text{atan}(0.7)$

15

How would you calculate the angle, using -1 notation?

$$\cos(\alpha) = 0.669$$

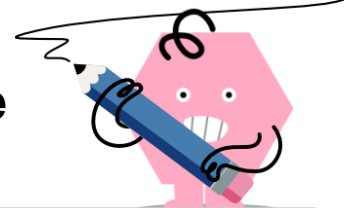
A	$\alpha = \cos(0.669) - 1$	B	$\alpha = \frac{1}{\cos^{-1}(0.669)}$
C	$\alpha = \cos^{-1}(0.669)$	D	$\alpha = \frac{1}{\text{acos}(0.669)}$

16

Calculate the value of this trig ratio

The cos of 10°

A	B	C	D	E	F
1.158	1.331	1.504	0.985	0.812	0.639



17 Calculate the trigonometric ratio of the given angle (in degrees)

$$\cos(65^\circ) = ?$$

A	B	C	D	E	F
0.769	0.25	0.942	0.596	0.423	0.096

18 Calculate the angle in degrees

$$\alpha \text{ has a tan of } 0.601$$

A	B	C	D	E	F
$\alpha = 36^\circ$	$\alpha = 41^\circ$	$\alpha = 21^\circ$	$\alpha = 31^\circ$	$\alpha = 46^\circ$	$\alpha = 11^\circ$

19 Calculate the angle in degrees, given the trigonometric ratio

$$\sin(\alpha) = 0.839$$

A	B	C	D	E	F
$\alpha = 52^\circ$	$\alpha = 57^\circ$	$\alpha = 42^\circ$	$\alpha = 67^\circ$	$\alpha = 37^\circ$	$\alpha = 72^\circ$

20 Calculate the angle in degrees, given the trigonometric ratio

$$\sin^{-1}(0.988) = \alpha$$

A	B	C	D	E	F
$\alpha = 81^\circ$	$\alpha = 61^\circ$	$\alpha = 96^\circ$	$\alpha = 86^\circ$	$\alpha = 66^\circ$	$\alpha = 91^\circ$

21 Calculate the angle in degrees, given the trigonometric ratio

$$\text{asin}(0.985) = \alpha$$

A	B	C	D	E	F
$\alpha = 70^\circ$	$\alpha = 65^\circ$	$\alpha = 90^\circ$	$\alpha = 80^\circ$	$\alpha = 60^\circ$	$\alpha = 95^\circ$

22 What angle (in degrees) has this ratio of sides?

$$\frac{\text{opp}}{\text{adj}} = 2.747$$

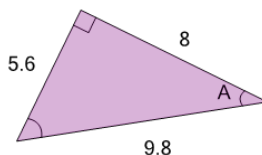
A	90 deg	B	60 deg
C	70 deg	D	75 deg
E	80 deg	F	85 deg

23 What angle (in degrees) has this ratio of sides?

$$\frac{\text{opp}}{\text{hyp}} = \frac{5.44}{6}$$

A	70 deg	B	55 deg
C	65 deg	D	75 deg
E	85 deg	F	60 deg

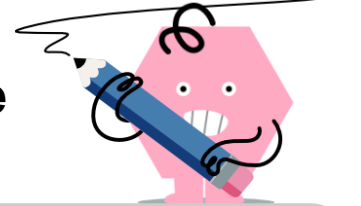
24 Solve for the trigonometric ratio in fraction form



A	$\tan(A) = \frac{8}{8}$	B	$\tan(A) = \frac{5.6}{8}$
C	$\tan(A) = \frac{8}{5.6}$		



Trigonometry Fundamentals - Practice



25

$$r=7.1$$

Solve for the ratio of lengths of line d over line r

$$d=4.1$$

$$\frac{d}{r} = ?$$

A	0.849	B	0.577
C	0.726	D	0.177
E	4.494	F	1.732

26

$$d=18.8$$

Solve for the ratio of lengths of line d over line m

$$m=4$$

$$\frac{d}{m} = ?$$

A	0.319	B	2.611
C	3.133	D	6.789
E	4.7	F	0.191

27

$$b=3.2$$

Solve for the ratio of lengths of line b over line y

$$y=2.9$$

$$\frac{b}{y} = ?$$

A	0.903	B	0.767
C	9.667	D	3.295
E	0.103	F	1.103

28

$$p=10.4$$

Solve for the ratio of lengths of line p over line y

$$y=6.9$$

$$\frac{p}{y} = ?$$

A	1.507	B	0.663
C	1.107	D	2.307
E	0.524	F	0.586

29

$$d=2.7$$

Solve for the ratio of lengths of line z over line d

$$z=3.4$$

$$\frac{d}{z} = ?$$

A	1.259	B	0.659
C	0.685	D	0.794
E	0.459	F	2.177

30

$$d=7.8$$

Solve for the ratio of lengths of line b over line d

$$b=8.4$$

$$\frac{d}{b} = ?$$

A	0.677	B	0.877
C	0.596	D	1.077
E	1.877	F	1.14

31

$$b=4.7$$

$$m=4$$

Solve for the ratio of lengths of line b over line m

$$\frac{b}{m} = ?$$

A	0.175	B	0.727
C	1.975	D	1.739
E	1.575	F	1.175

32

$$p=3.1$$

$$y=9.7$$

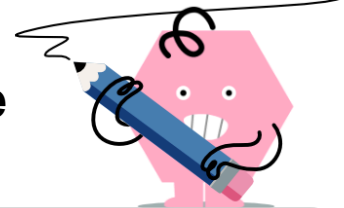
Solve for the ratio of lengths of line p over line y

$$\frac{p}{y} = ?$$

A	0.68	B	2.082
C	3.566	D	0.32
E	1.39	F	0.92

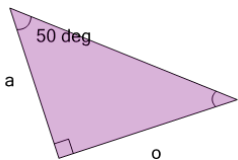


Trigonometry Fundamentals - Practice



33

Visually approximate the ratio of side 'o' to side 'a'

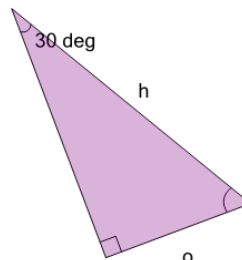


A $\frac{o}{a} = -0.53$

B $\frac{o}{a} = 1.19$

C $\frac{a}{h} = 77.38$

34 Visually approximate the Sine of the given angle

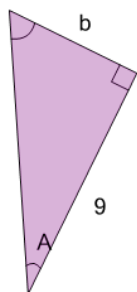


A $\sin(30) = 1.51$

B $\sin(30) = 0.93$

C $\sin(30) = 0.50$

35



Solve for the side length in ratio form

A $b = \frac{9}{\tan(A)}$

B $b = \tan(A) \times 9$

36 Select the definition of this side in terms of Sine

Opposite

A $\sin \times adj$

B $\frac{hyp}{\sin}$

C $\frac{adj}{\sin}$

D $\sin \times hyp$

E $\sin \times opp$

F $\frac{\sin}{opp}$

37 Solve for the trigonometry ratio given the values

$adj = 6$
 $hyp = 9.3$
 $opp = 7.2$
 $\sin(\alpha) =$

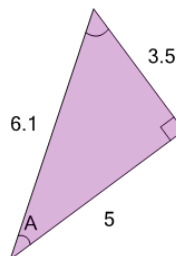
A $\sin(\alpha) = 0.96$

B $\sin(\alpha) = 1.04$

C $\sin(\alpha) = 0.77$

D $\sin(\alpha) = 56.61$

38 Solve for the trigonometric ratio in decimal form



A $\tan(A) = 1.21$

B $\tan(A) = 0.70$

C $\tan(A) = 26.29$

39 Solve for the angle in degrees given the values

$opp = 12$
 $adj = 12$
 $\mu = ?^\circ$

A $\mu = 50^\circ$

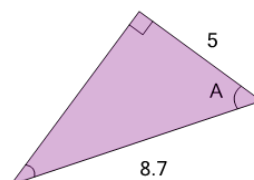
B $\mu = 35^\circ$

C $\mu = 45^\circ$

D $\mu = 65^\circ$

E $\mu = 25^\circ$

40 Solve for the angle in degrees with trigonometry

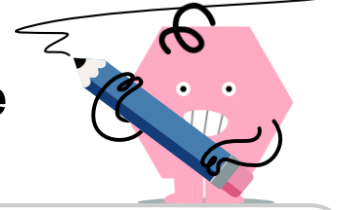


A $A = 40^\circ$

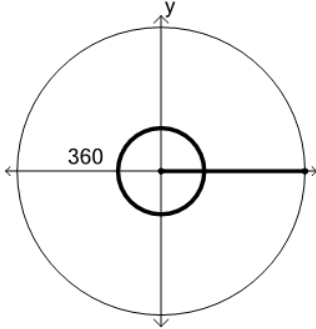
B $A = 55^\circ$

C $A = 45^\circ$

D $A = 75^\circ$



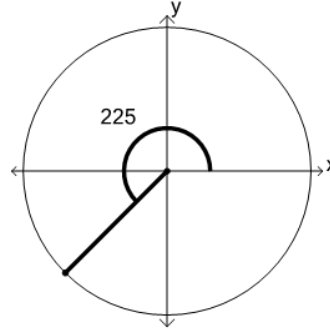
41



How many radians is this angle
($180^\circ = \pi$ radians)?

A	B
2π rad	$\frac{11\pi}{6}$ rad

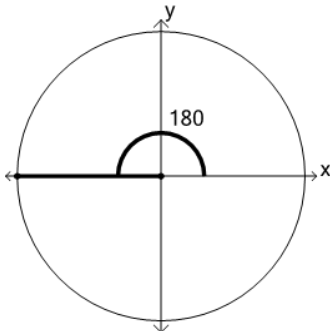
42



How many radians is this angle
($180^\circ = \pi$ radians)?

A	B
$\frac{5\pi}{4}$ rad	$\frac{7\pi}{6}$ rad

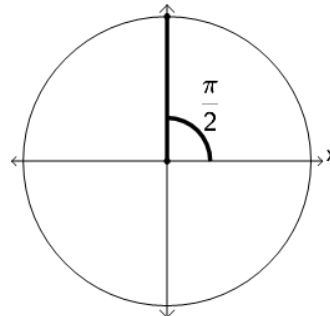
43



How many radians is this angle
($180^\circ = \pi$ radians)?

A	B
$\frac{5\pi}{4}$ rad	π rad

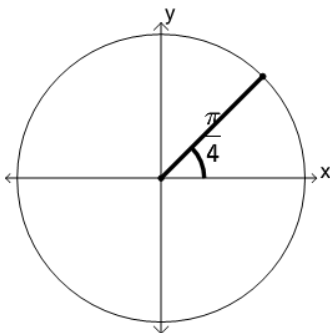
44



How many degrees is this angle
($180^\circ = \pi$ radians)?

A	B
90°	135°

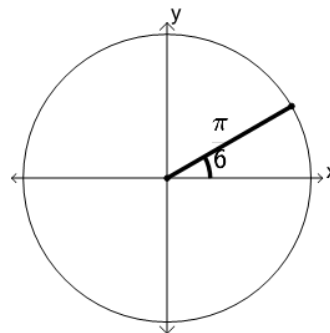
45



How many degrees is this angle
($180^\circ = \pi$ radians)?

A	B
45°	60°

46



How many degrees is this angle
($180^\circ = \pi$ radians)?

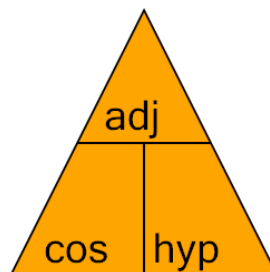
A	B
135°	30°

47 How many radians is this angle
($180^\circ = \pi$ radians)?

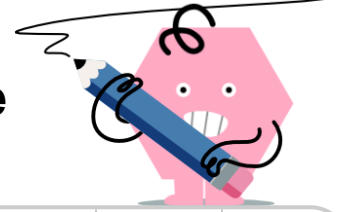
0°

A	B
0 rad	$\frac{2\pi}{3}$ rad

48 Which trigonometry fact comes
from this fact family



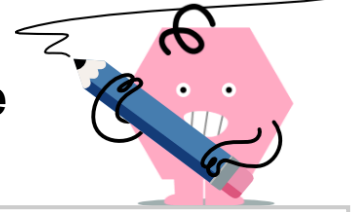
A	B	C
$\cos = \frac{\text{hyp}}{\text{adj}}$	$\cos = \frac{\text{adj}}{\text{hyp}}$	$\text{adj} = \frac{\cos}{\text{hyp}}$



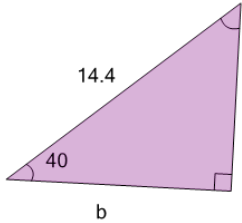
49 How many radians is this angle (180° = π radians)?		180°	50 What fact family triangle would give this trigonometry fact?		A 	B 	C
A $\frac{7\pi}{6}$ rad	B π rad		$\text{hyp} = \frac{\text{opp}}{\sin}$				
51 How many radians is this angle (180° = π radians)?		360°	52 How many radians is this angle (180° = π radians)?				
A $\frac{4\pi}{3}$ rad	B 2π rad		A 150°				
			B 180°				
53 How many radians is this angle (180° = π radians)?		$\frac{7\pi}{4}$ rad	54 How many radians is this angle (180° = π radians)?				
		A 315°	B 300°		A 300°		
					B 315°		
55 Solve for the side length in decimal form by calculating the trigonometric ratio		A $b = 0.50 \times 8.1$	B $b = \frac{0.50}{8.1}$		56 Solve for the side indicated		
		C $b = \frac{8.1}{0.50}$	D $b = \frac{0.50}{4}$		$\theta = 45^\circ$ $\text{hyp} = 11.3$ $\text{adj} = ?$		
		E $b = \frac{0.50}{7}$	F $b = 0.50 \times 4$		A $\text{adj} = 8.0$		
					B $\text{adj} = 6.4$		
					C $\text{adj} = 9.6$		
					D $\text{adj} = 4.8$		
					E $\text{adj} = 7.2$		
					F $\text{adj} = 11.2$		



Trigonometry Fundamentals - Practice



57 Solve for the side length with trigonometry



A $b = 11.0$	B $b = 14.3$
C $b = 6.6$	D $b = 13.2$
E $b = 12.1$	F $b = 8.8$