Trigonometry

- we use trig to find missing sides and angles
- the Δ must be a a right Δ

c
hypotneuse
longest side
across from
90°

B

a
opposite side
across from θ

reference angle
theta
θ

A

θ

b
adjacent side
beside θ

C
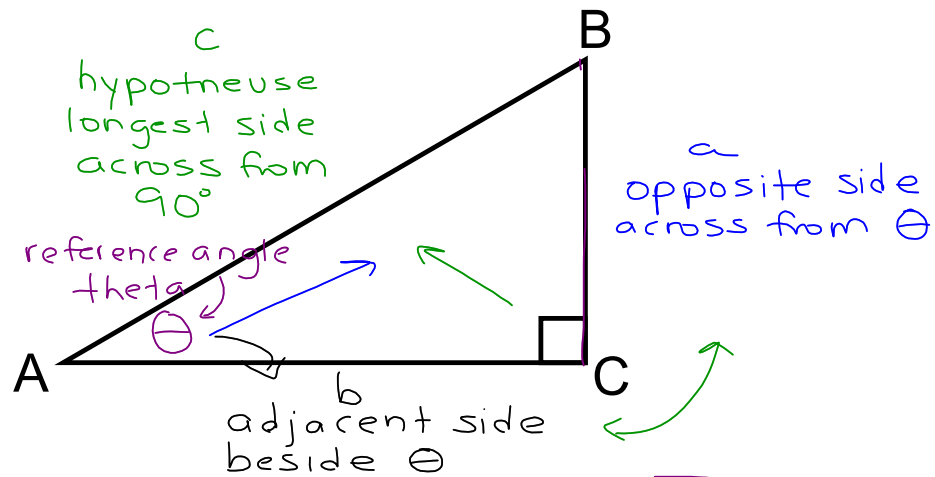
From ∠A the <u>opposite</u> side is a or $\overline{BC}$
From ∠A the <u>adjacent</u> side is b or $\overline{AC}$

From ∠B the <u>opp</u> side is b or $\overline{AC}$
From ∠B the <u>adj</u> side is a or $\overline{BC}$
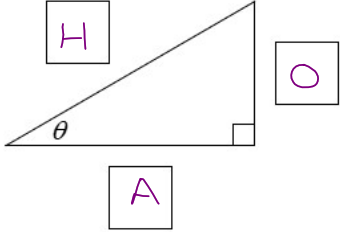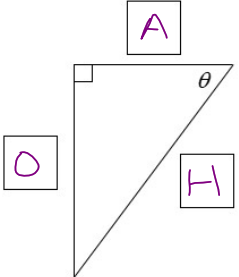
J

i

h

H

j

I
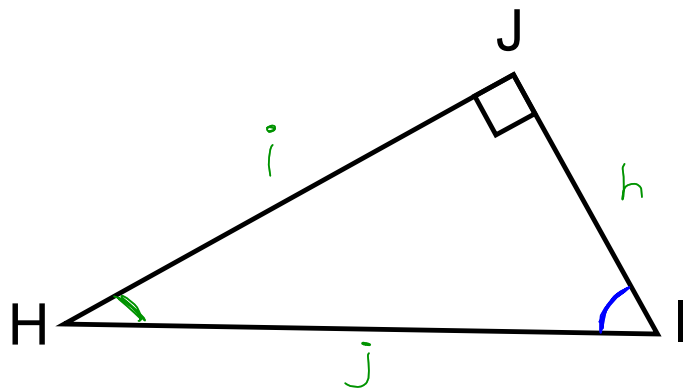
For ΔHIJ
1) What side is the hypothenus? j
2) What side is <u>adj</u> to ∠H? i
3) What side is <u>opp</u> to ∠H? h
4) What side is <u>adj</u> to ∠I? h
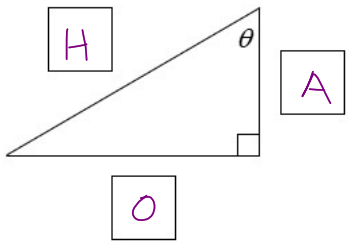5) What side is <u>opp</u> to ∠I? i
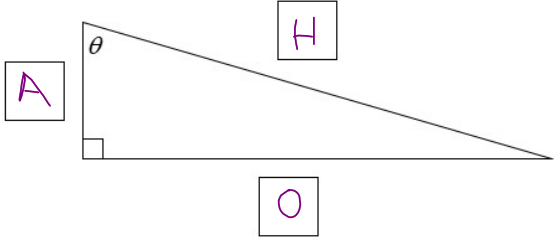
IDENTIFYING THE SIDES OF A RIGHT TRIANGLE

1. Label the sides to the correct position for each triangle.

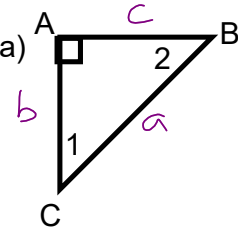   Use H for hypotneuse, A for adjacent and O for opposite.
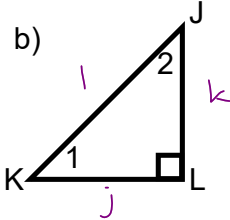
a)

H O A θ

b)

A θ O H

c)

H θ A O

d)

θ A H O
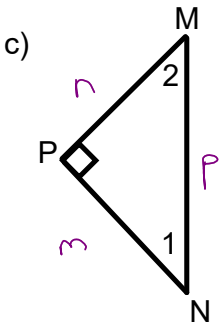
2. In each triangle below, identify the hypotenuse, the opposite side, and the adjacent side in respect to angles 1 and 2.

a)

A c B
b
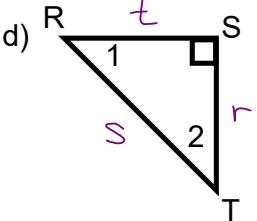2
1 a
C

Hyp   a
Opp ∠1   c
Opp ∠2   b
Adj ∠1   b
Adj ∠2   c

b)

J
l 2
1 k
K L
j
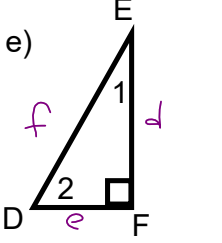
Hyp   l
Opp ∠1   k
Opp ∠2   j
Adj ∠1   j
Adj ∠2   k

c)

M
n 2
P p
m 1
N
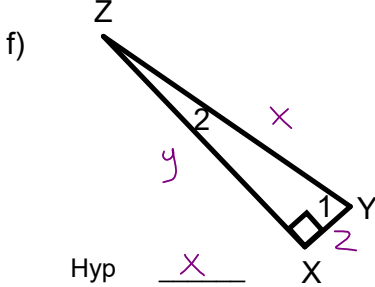
Hyp   p
Opp ∠1   n
Opp ∠2   m
Adj ∠1   m
Adj ∠2   n

d)

R t S
1
s 2 r
T

Hyp   s
Opp ∠1   r
Opp ∠2   t
Adj ∠1   t
Adj ∠2   r

e)

E
f 1 d
2
D e F

Hyp   f
Opp ∠1   e
Opp ∠2   d
Adj ∠1   d
Adj ∠2   e

f)

Z
2 x
y 1 Y
2
X

Hyp   x
Opp ∠1   y
Opp ∠2   z
Adj ∠1   z
Adj ∠2   y