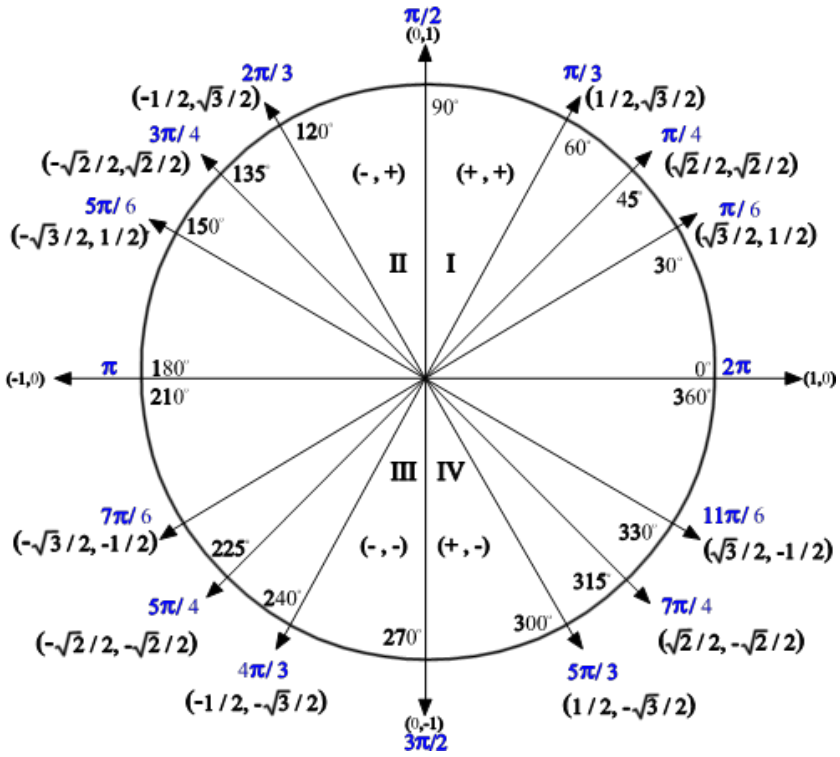

π/2
(0,1)
2π/3
(-1/2,√3/2)
π/3
(1/2,√3/2)
90°
120°
60°
3π/4
(-√2/2,√2/2)
π/4
(√2/2,√2/2)
135°
45°
(-,+)
(+,+)
5π/6
(-√3/2,1/2)
π/6
(√3/2,1/2)
150°
30°
II
I
π
180°
0°
2π
(-1,0)
(1,0)
210°
360°
III
IV
7π/6
(-√3/2,-1/2)
11π/6
(√3/2,-1/2)
225°
330°
(-,-)
(+,-)
5π/4
(-√2/2,-√2/2)
7π/4
(√2/2,-√2/2)
240°
315°
270°
300°
4π/3
(-1/2,-√3/2)
5π/3
(1/2,-√3/2)
(0,-1)
3π/2

Let's Review:

- Simplifying Radicals
- Pythagoras Theorem
- Basic Trigonometric Properties

Radical Review

Simplify

$\sqrt{12}$

$\sqrt{2 \cdot 2 \cdot 3}$

$2\sqrt{3}$

$5\sqrt{27}$

$5\sqrt{3 \cdot 3 \cdot 3}$

$15\sqrt{3}$

$5\sqrt{8} + 4\sqrt{18}$

$5\sqrt{2 \cdot 2 \cdot 2} + 4\sqrt{3 \cdot 3 \cdot 2}$

$10\sqrt{2} + 12\sqrt{2}$

$22\sqrt{2}$

Rationalizing the Denominator

Get rid of radical — bottom

$\frac{5}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$

$\frac{5\sqrt{2}}{\sqrt{4}}$

$\boxed{\frac{5\sqrt{2}}{2}}$

$\frac{8\sqrt{2}}{6\sqrt{8}}$

$\frac{8\sqrt{2}}{6\sqrt{2\cdot2\cdot2}}$

$\frac{8\sqrt{2}}{12\sqrt{2}} \rightarrow \frac{8}{12} \rightarrow \boxed{\frac{2}{3}}$

Think Conjugates!

$(a+b) \rightarrow (a-b)$

$\frac{(8-\sqrt{2})(2+\sqrt{5})}{(2-\sqrt{5})(2+\sqrt{5})}$

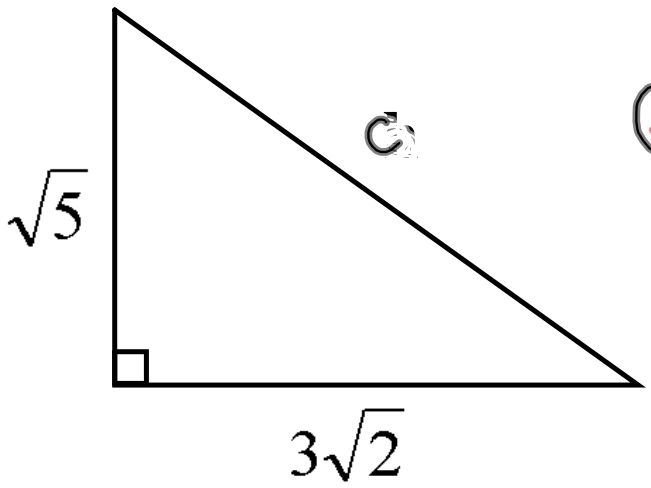
$\frac{16+8\sqrt{5}-2\sqrt{2}-\sqrt{10}}{4+2\sqrt{5}-2\sqrt{5}-\sqrt{25}}$

$\frac{16+8\sqrt{5}-2\sqrt{2}-\sqrt{10}}{-1}$

$\boxed{-16-8\sqrt{5}+2\sqrt{2}+\sqrt{10}}$

Think Pythagorean Theorem!

Determine the length of the idicated side!



$a^2+b^2=c^2$

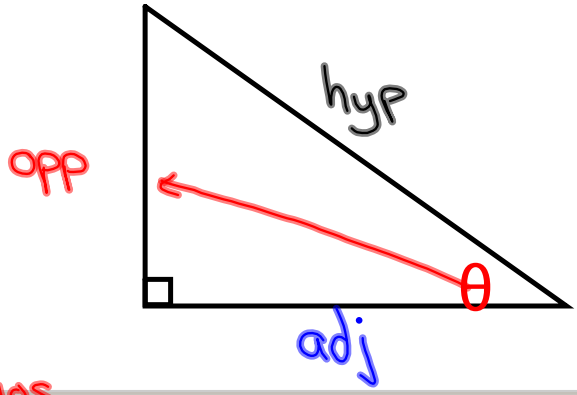
$(\sqrt{5})^2+(3\sqrt{2})^2=c^2$

$5+18=c^2$

$23=c^2$

$\sqrt{23}=c$

Trigonometric Ratios



Primary Ratios

$$\sin\theta = \frac{opp}{hyp} \qquad \cos\theta = \frac{adj}{hyp} \qquad \tan\theta = \frac{opp}{adj}$$

Reciprocal Ratios

$$\csc\theta = \frac{hyp}{opp} \qquad \sec\theta = \frac{hyp}{adj} \qquad \cot\theta = \frac{adj}{opp}$$

cosecant secant cotangent

Homework

Attachments

Trig&3SpaceCourseOutline.doc