

## 9.6: Families of Rt $\Delta$ s

Note Title

2/12/2016

- Pyth. Triples : whole numbers

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

scalar(a, b, c)  $\rightarrow$  scalar(leg, leg, hyp)

$$\sqrt{\phantom{x}} (3, 4, 5)$$

$$2(3, 4, 5) \rightarrow (6, 8, 10)$$

$$3(3, 4, 5) \rightarrow (9, 12, 15)$$

$$\sqrt{3}(3, 4, 5) \rightarrow (3\sqrt{3}, 4\sqrt{3}, 5\sqrt{3})$$

- Reduced  $\Delta$  Principle

- NEED TO KNOW PYTH. TRIPLES ON BOTTOM OF P 398 } MUST MEMORIZE  
(3, 4, 5), (5, 12, 13), (7, 24, 25); (8, 15, 17)

- GOOD TO KNOW (9, 40, 41)

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2/12/16

9.6: 1-18

1 (3,4,5)

a (15,20,-)  $\rightarrow$  5(3,4,5)  $\rightarrow$  25

b

c

d

e

2 (5,12,13)

a

b

c

d

e

3 (7,24,25)

a

b

c

d

e

4 (8,15,17)

a

b

c

d

e

5 (Mixed)

a (9 - 15)

b (6 - 8)  $\rightarrow$  2 (3  $\sqrt{7}$  4)  $\rightarrow$  2 $\sqrt{7}$

$$3^2 + x^2 = 4^2$$

$$x^2 = 16 - 9$$

$$x = \sqrt{7}$$

c (-24, 26)

d

e

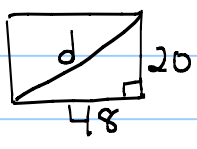
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6



$$(20, 48, d) \rightarrow 4(5, 12, \text{---}) \rightarrow$$

7.

