$3^x + (3+1)^y$ $x=3$ $y=2$

$27 + 16$

43

$$\frac{2x^{-4}}{(3y^2)^{-3}} = \frac{2}{x^4/(3y^2)^{-3}}$$

$$\frac{2(3y^2)^3}{x^4}$$

$$\frac{2(27y^6)}{x^4} \quad \frac{54y^6}{x^4}$$

$$\frac{(3x^2)^{-2}}{2x^{-3}}$$

$$\frac{x^3}{2(3x^2)^2}$$

$$\frac{x^3}{2(9x^4)} = \frac{x^3}{18x^4} = \frac{1}{18x}$$

$$\frac{(3x^2)(4x^2)}{(2x^2)^{-1}}$$

$$(12x^4)(2x^2)$$

$$\boxed{24x^6}$$

Irrational #s

Rational #s

Squares

Square Roots

Pythagorean Theorem

Irrational Numbers

- do not terminate
- do not repeat
- also is ex. $\sqrt{3}$

Rational Numbers

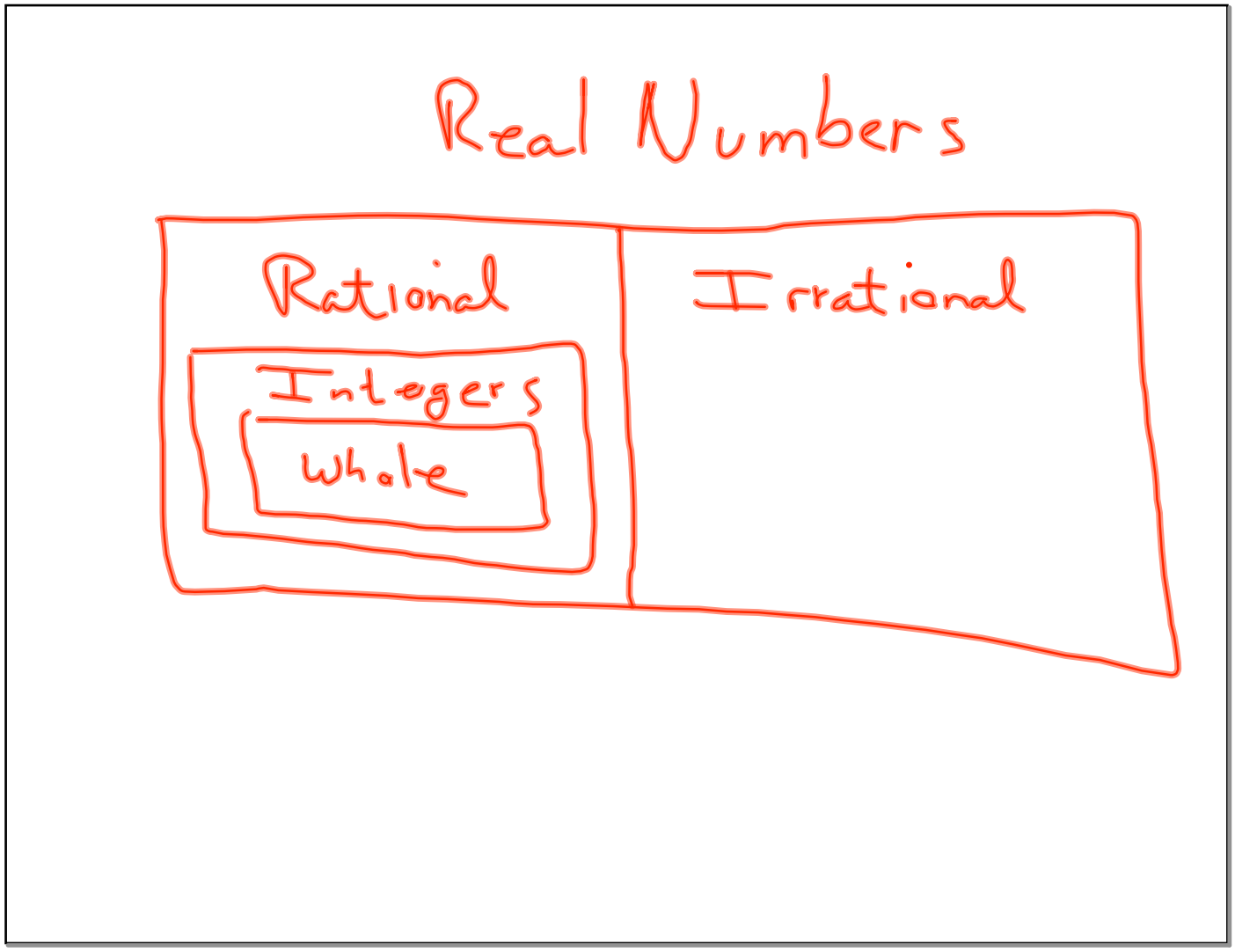
- Terminate
- Repeat
- ex $\sqrt{4}$

Perfect Square

16 is perfect square of 4

Square Root

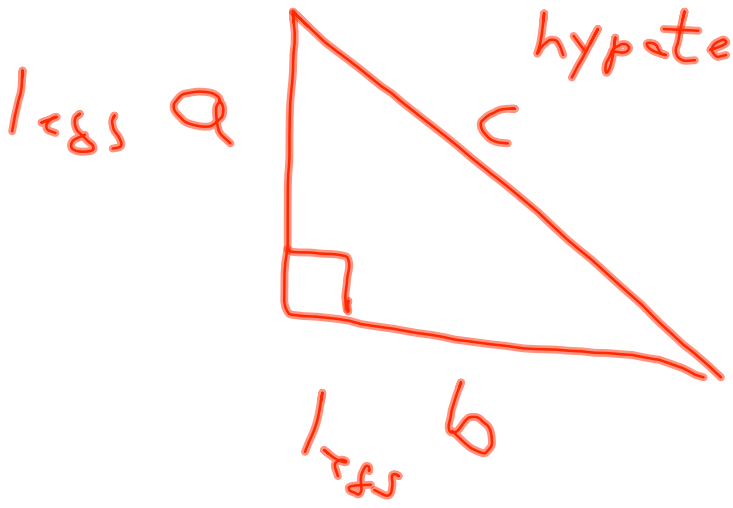
$\sqrt{16} = 4$

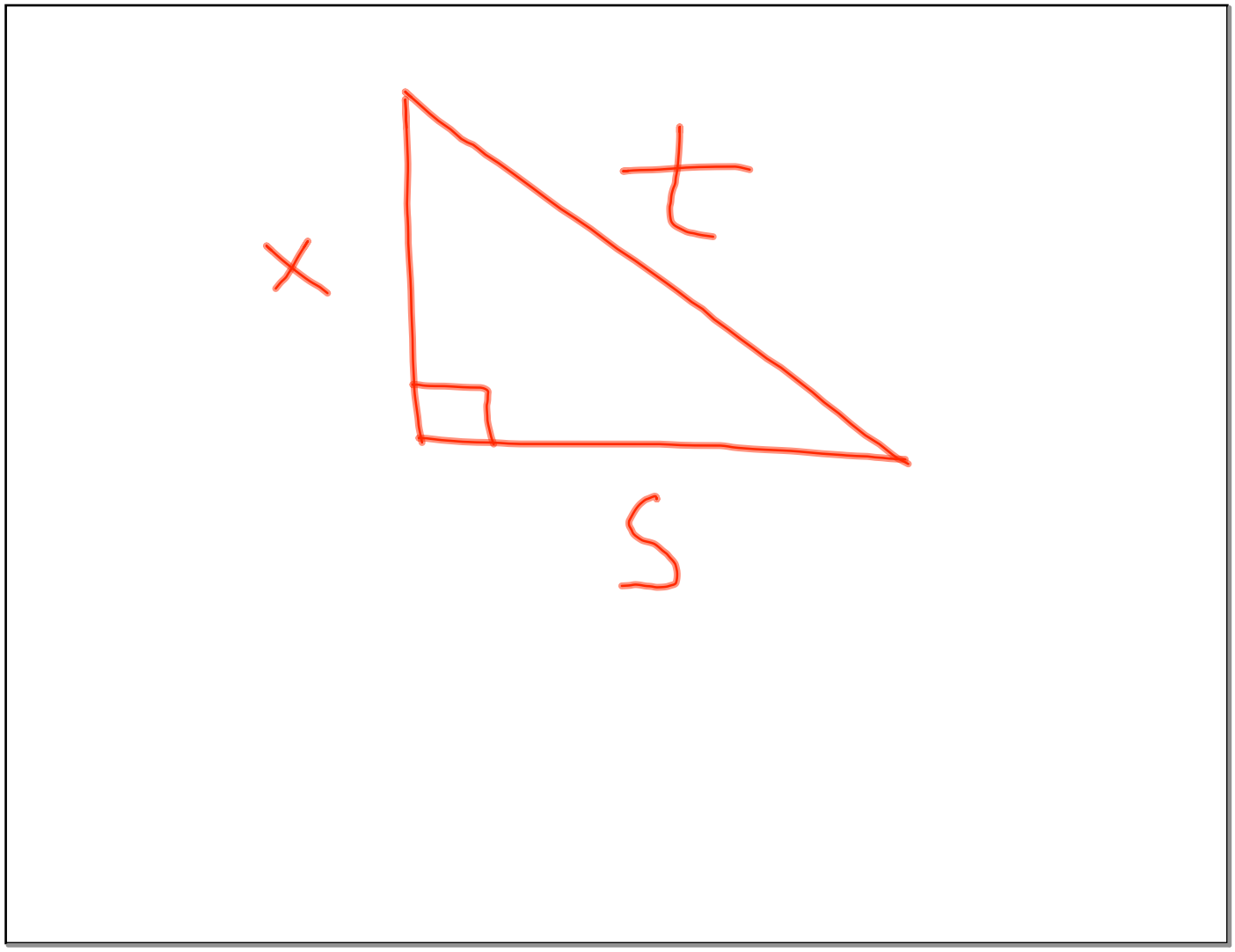

Real Numbers
Rational
Integers
Whole
Irrational

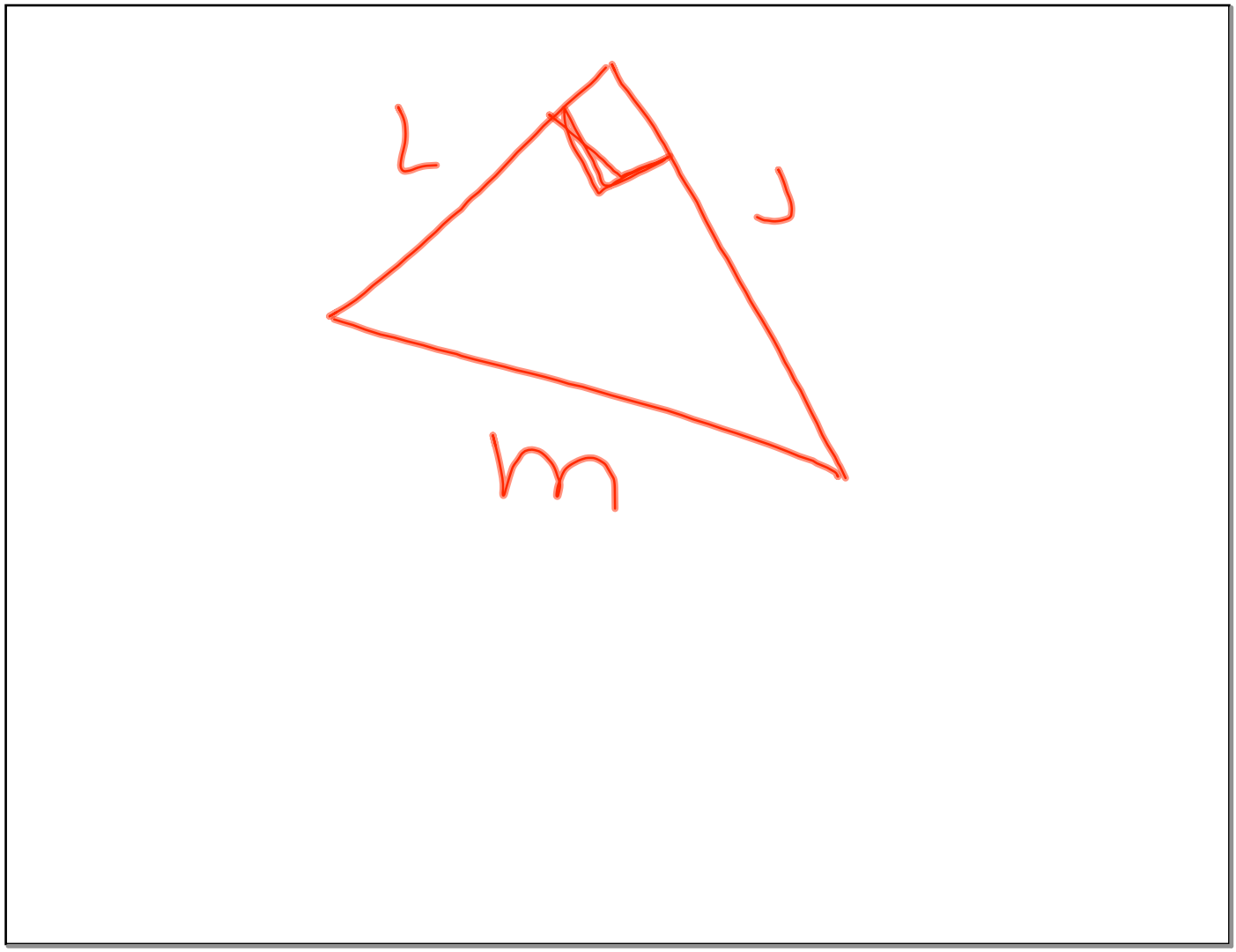
Pythagorean Theorem

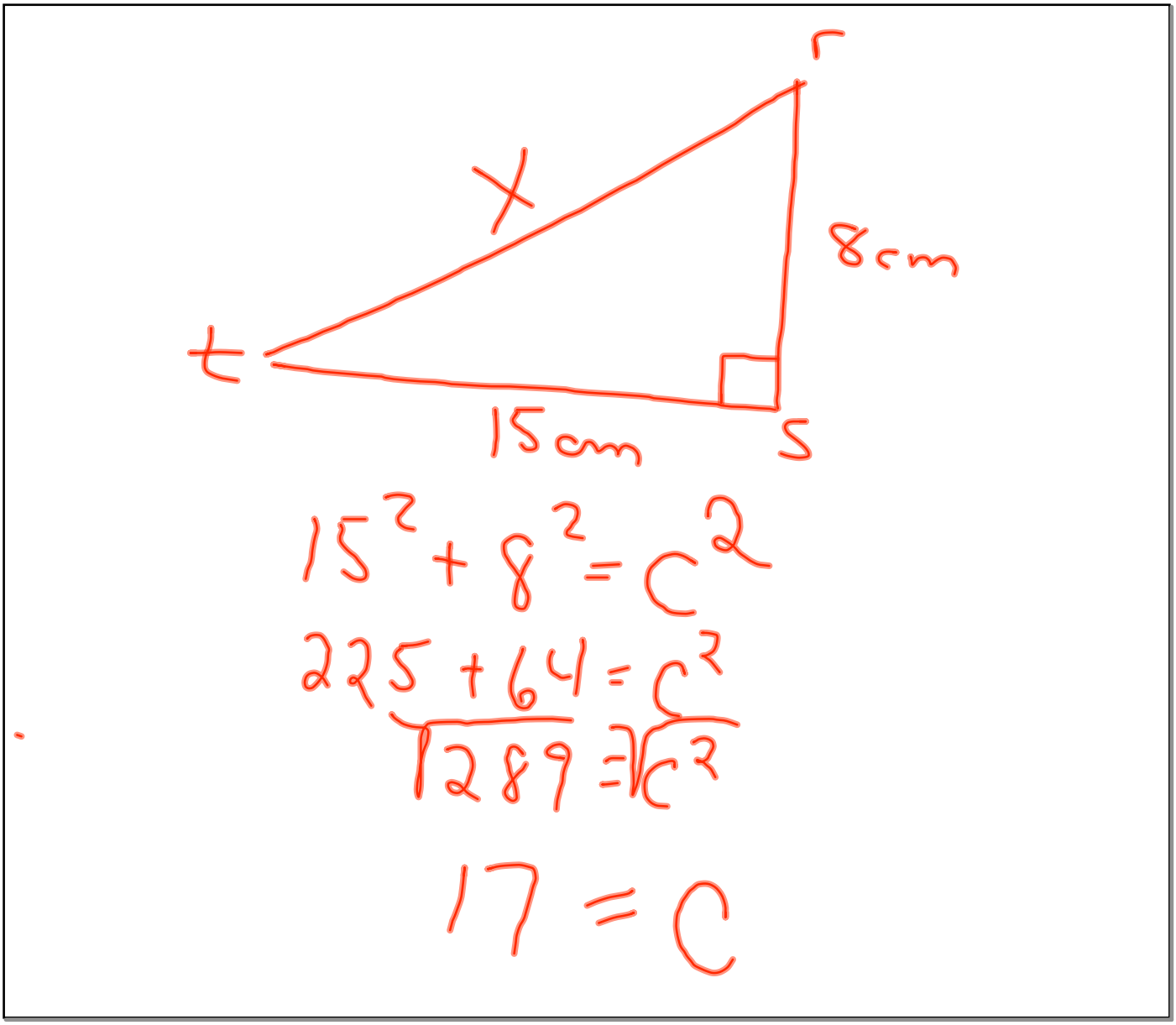
$$a^2 + b^2 = c^2$$

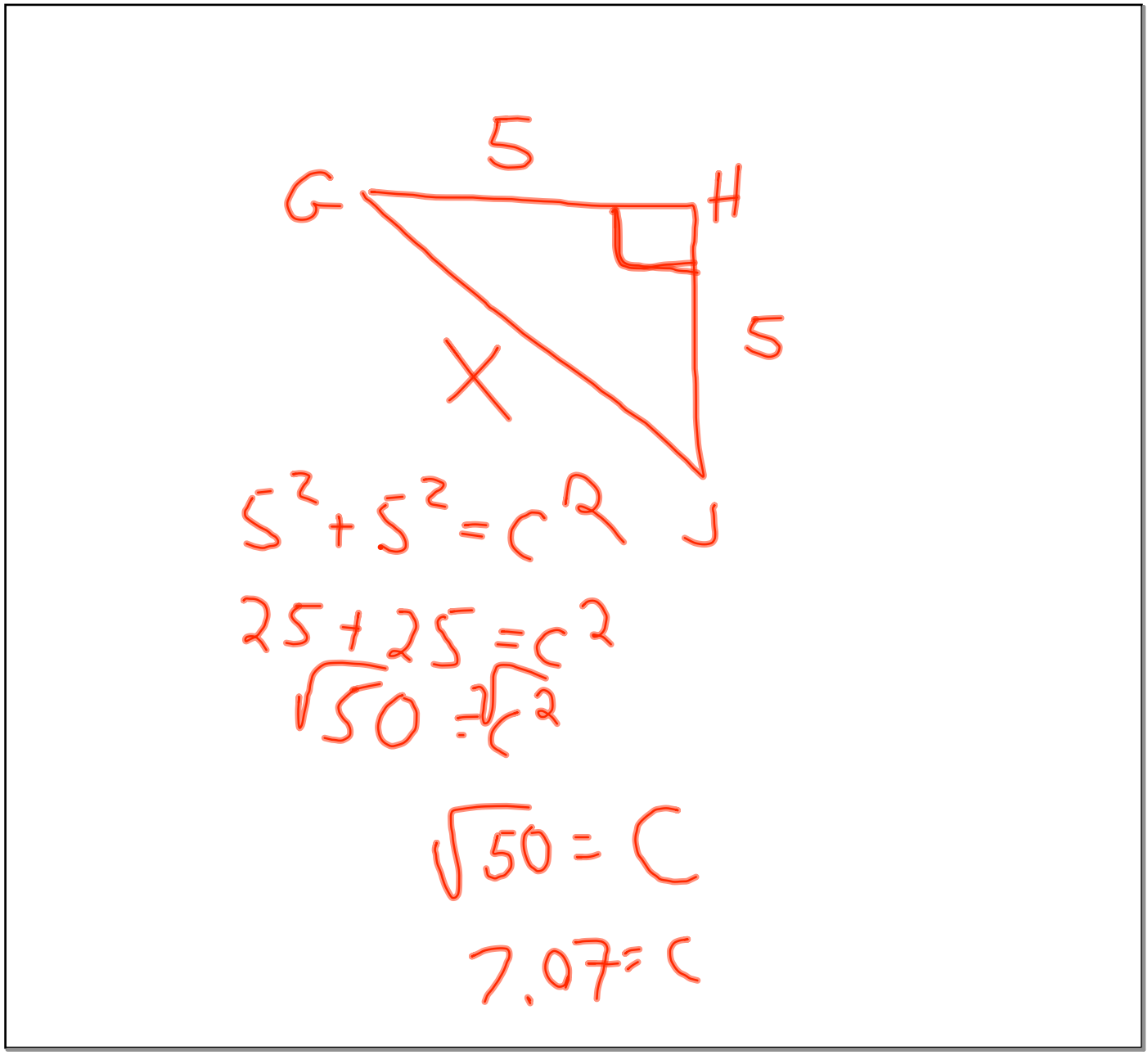
For any right triangle

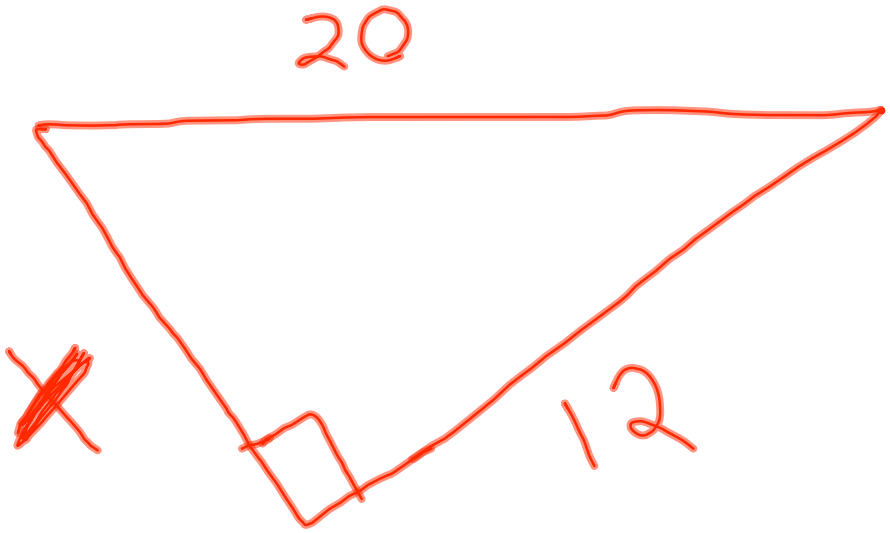



x
t
s


l
j
m


r
X
8cm
t
15cm
s
$15^2 + 8^2 = c^2$
$225 + 64 = c^2$
$\sqrt{289} = \sqrt{c^2}$
$17 = c$


5
G
H
5
X
$5^2+5^2=c^2$
J
$25+25=c^2$
$\sqrt{50}=\sqrt{c^2}$
$\sqrt{50}=c$
$7.07=c$



$12^2 + b^2 = 20^2$

$144 + b^2 = 400$

$-144 \quad -144$

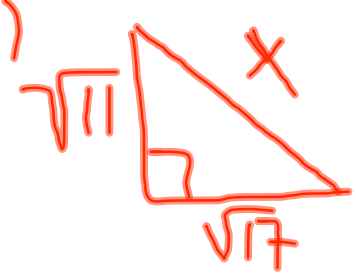
$\sqrt{b^2} = \sqrt{256}$

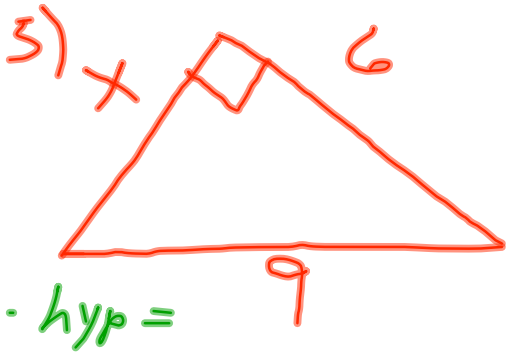
$b = 16$

1) legs: 9ft and 6ft - hypotenuse = ?

2) leg 15, hypotenuse 18 - other leg = ?

3) leg 20, hyp 24 - other leg = ?

4) 

5) 

6) legs 3.9 and 5.4 - hyp =

7) leg 5.1, hyp 9.8 - other leg =