M8 Review Ch 1

Name _____

Blk _____

Squares/Square Roots/Pythagorean Theorum

$5 \cdot 5 = 5^2 = 25$ and $\sqrt{25} = \sqrt{5 \cdot 5} = 5$

- Five Squared → $5^2 = 25 = 5 \cdot 5$
- Square Root of 5 → $\sqrt{5} \approx 2.236$
- Square Root of 25 → $\sqrt{25} = \sqrt{5 \cdot 5} = 5$

A. Know the difference between 'squaring' (x^2) a number and 'square rooting' ($\sqrt{x}$) a number

B. Know your first 20 perfect squares ($1^2, 2^2, 3^2 \ldots$)

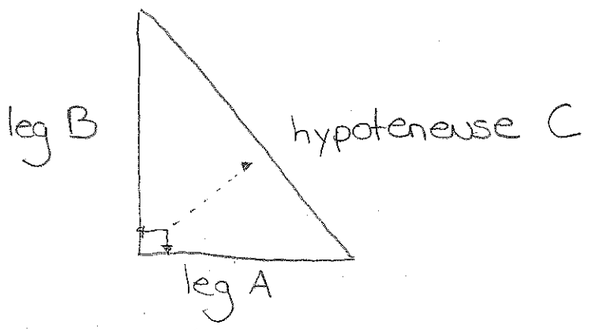
$1^2 = 1 \cdot 1 = 1$ $\quad \sqrt{1} = \sqrt{1 \cdot 1} = 1$

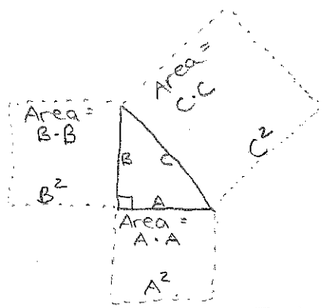
$2^2 = 2 \cdot 2 = 4$ $\quad \sqrt{4} = \sqrt{2 \cdot 2} = 2$

$3^2 = 3 \cdot 3 = 9$ $\quad \ldots$

Pythagorean Theorum $A^2 + B^2 = C^2$

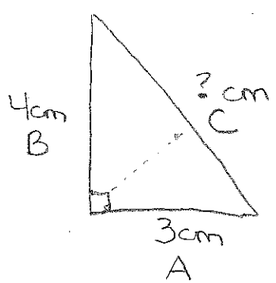
- only for right (90°) angle triangles
- A & B are the 'legs'; A = usually the short leg
- C must be the hypoteneuse





$$A^2 + B^2 = C^2$$

Ex 1 Calculate the missing length



A = 3
B = 4
C = ?

1) label A, B, C

2) calculate $A^2/B^2/C^2$ $A^2 + B^2 = C^2$

$A^2 = 3 \cdot 3 = 3^2$

$B^2 = 4 \cdot 4 = 4^2$

$C^2 = ?$

$3^2 + 4^2 = C^2$

$9 + 16 = C^2$

$25 = C^2$ * this is NOT C must $\sqrt{C^2} \rightarrow C$

3) $\sqrt{25} = \sqrt{C^2}$

$\sqrt{5 \cdot 5} = \sqrt{C \cdot C}$

$5_{cm} = C$

HW

A	B	C
4, 5, 11, 18, 19	9, 12, 13, 20, 22	21, 23, 25, 26