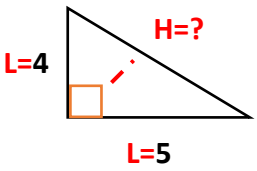
Algebra Readiness | Pythagorean Theorem and Distance | Full Name _____

05 A – Worksheet 1 | Calculator okay! | Date _____ Period _____

- Label the right angle and the sides of the triangle (legs and hypotenuse).
- Then use the Pythagorean Theorem to find the exact length of the missing side (this might have a root).
- If the missing side is irrational, state between which two consecutive integers the number lies.
- If the missing side is irrational, find a decimal approximation of the side by using a calculator (2 decimal places).

1.



exact

$4^2 + 5^2 = h^2$

$16 + 25 = h^2$

$41 = h^2$

$\sqrt{41} = \sqrt{h^2}$

$\sqrt{41} = h$

estimated

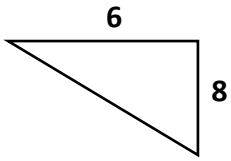
$\sqrt{36} < \sqrt{41} < \sqrt{49}$

$6 < \sqrt{41} < 7$

calculator

$h \approx 6.403$

2.

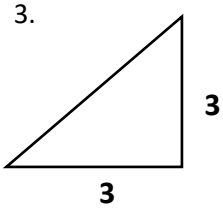


Exact

Estimated

Calculator

3.

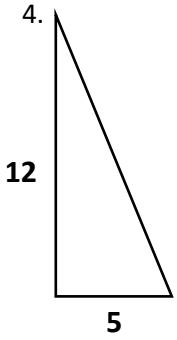


Exact

Estimated

Calculator

4.

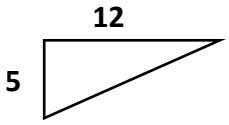


Exact

Estimated

Calculator

5.

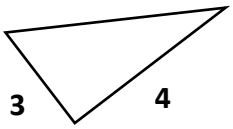


Exact

Estimated

Calculator

6.



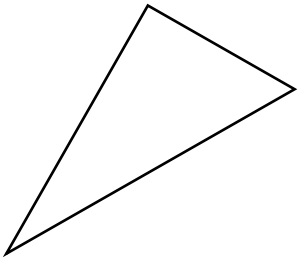
Exact

Estimated

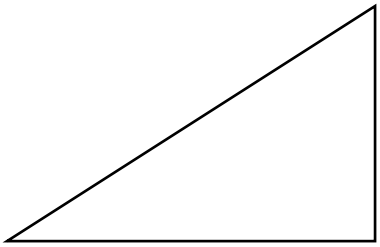
Calculator

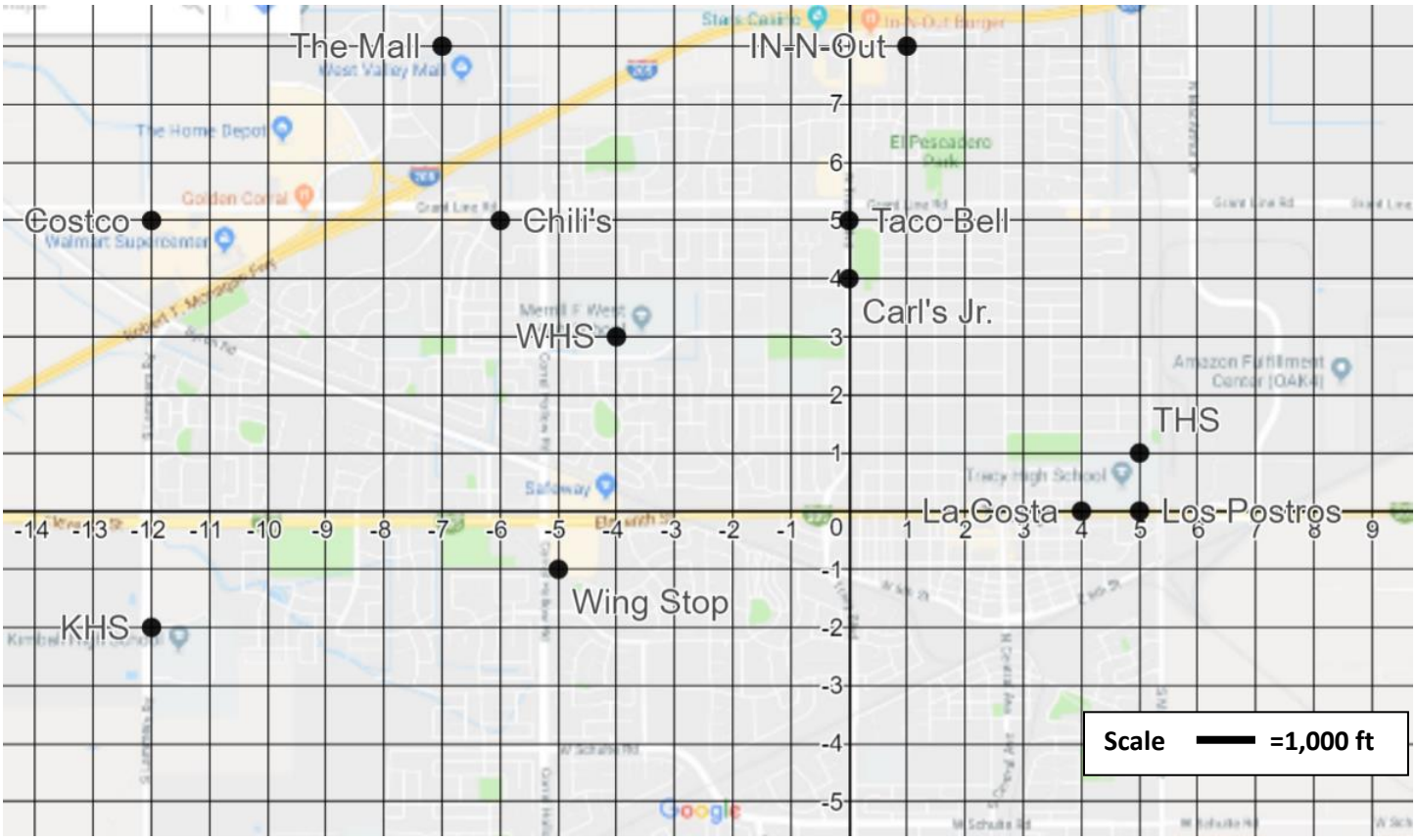
- Measure and label the lengths ALL 3 SIDES of the right triangle in millimeters (mm).
- Then check the accuracy of your measurements by using the Pythagorean Theorem.

7.



8.





Students at local high schools are debating where they should go eat at lunch. Use the map of Tracy above to find distances between various Tracy locations. Each square on the grid is 1,000 ft by 1000 ft. You will use a calculator but must show your work. (2 decimal places)

10. THS and Los Potros
Exact

Calculator

11. WHS and Chili's
Exact

Calculator

12. THS and La Costa
Exact

Calculator

13. KHS and The Mall
Exact

Calculator

14. WHS and Wing Stop
Exact

Calculator

15. THS and Chili's
Exact

Calculator

16. Which school is closer to In-N-Out, THS or WHS? Justify.

17. Which school is closest to Costco, KHS, THS or WHS? Justify.