1-3 Pythagorean Theorem and Distance Formula (2019)

Name: _____ Time› Start: _____ Finish: _____ Total Time = _____

Remember that the Pythagorean Theorem states that $a^2 + b^2 = c^2$, with a and b being the legs of the right triangle and c being the hypotenuse. Tell the measurement of the missing side of each triangle below.

1. _____ 2. _____ 3. _____

4. _____ 5. _____ 6. _____

Figure 1

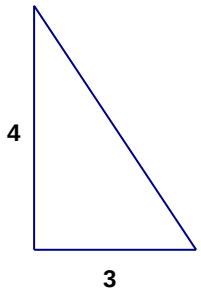


Figure 2

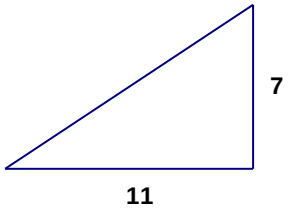


Figure 3

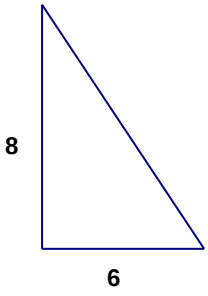


Figure 4

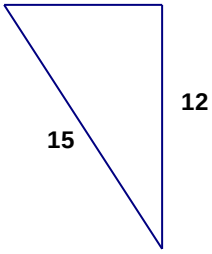


Figure 5

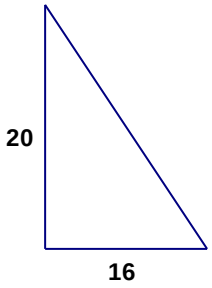
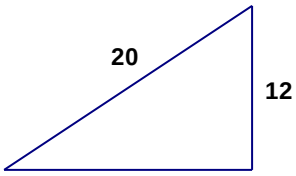


Figure 6



For 7 – 12, Find the distance between the two given points and use your calculator to find each square root. Round your answer to the nearest tenth.

_____ 7. (1, 3) to (4, 7). _____ 8. (-1, 5) to (-4, 7).

_____ 9. (3, 3) to (3, 8). _____ 10. (-11, -3) to (-9, 1).

_____ 11. If you walk 8 miles due East and 6 miles due South, how far from the starting point are you?

_____ 12. If you walk 3 miles due North and 4 miles due West, how far from the starting point are you?

Determine if given the measurements of three sides of a triangle would make the triangle a right triangle. Remember that if they are right triangles, then the sum of the two legs squared will equal the hypotenuse squared. It is also handy to remember that the hypotenuse will have to be the longest leg of the three numbers given since the hypotenuse is always the longest leg in a right triangle.

Example: Is a triangle with sides of 7, 24, and 25 a right triangle?

Answer: If it is a right triangle, it would mean that 25 is the hypotenuse since it is the longest leg. So now we must see if $7^2 + 24^2 = 25^2$ If it does, then these three legs are the legs of a right triangle. In this case, it is true; hence 7, 24, and 25 would make a right triangle.

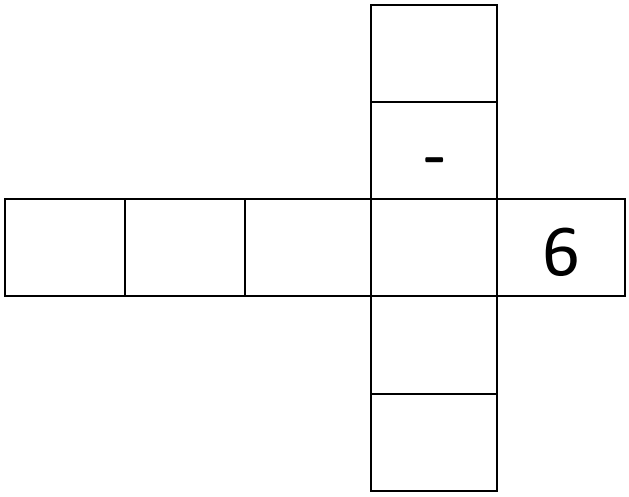
_____ 13. Is a triangle with sides of 1, 2, and 3 a right triangle?

_____ 14. Is a triangle with sides of 2, 4, and 6 a right triangle?

_____ 15. Is a triangle with sides of 5, 12, and 13 a right triangle?

_____ 16. Is a triangle with sides of 8, 17, and 15 a right triangle?

Mabble 1



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