Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Right Triangle Proportions *Classwork* Ditto**



1. In the diagram below, the length of the legs  and  of right triangle *ABC* are 6 cm and 8 cm, respectively. Altitude  is drawn to the hypotenuse of .



What is the length of  to the *nearest tenth of a centimeter*?

1. The drawing for a right triangular roof truss, represented by , is shown in the accompanying diagram. If  is a right angle, altitude  meters, and  is 6 meters longer than , find the length of base  in meters.

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1. In right triangle *ABC* shown in the diagram below, altitude  is drawn to hypotenuse , , and .



What is the length of ?

1. In the diagram below of right triangle *ABC*,  is the altitude to hypotenuse , , and .



What is the length of ?

1. In the diagram below of right triangle *ABC*, altitude  is drawn to hypotenuse .



If  and , what is the length of altitude ?

1. In right triangle *ABC* below,  is the altitude to hypotenuse . If  and the ratio of *AD* to *AB* is 1:5, determine and state the length of . [Only an algebraic solution can receive full credit.]

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1. In the diagram below of right triangle *ABC*, altitude  is drawn to hypotenuse , , and .



What is the length of ?

1. Triangle *ABC* shown below is a right triangle with altitude  drawn to the hypotenuse .



If  and , what is the length of ?

 

1. In ,  is a right angle and  is drawn perpendicular to hypotenuse . If , , and , what is the length of ?
2. In the diagram below of right triangle *ACB*, altitude  intersects  at *D*. If  and ,find the length of  in simplest radical form.

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1. In the diagram below of right triangle *ABC*, an altitude is drawn to the hypotenuse .



Which proportion would always represent a correct relationship of the segments?

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |

14.



15.



16.



17.



18. 

19.

In the diagram below,  is a  right triangle. The altitude, *h*, to the hypotenuse has been drawn. Determine the length of *h*.

