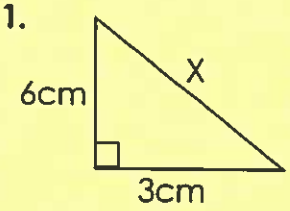
Name _____ HW Packet Chapter 7

Pythagorean Theorem

Find the length of the missing side in the following examples. Round answers to the nearest hundredth (2 decimal places), if necessary. **Show all work**

1.



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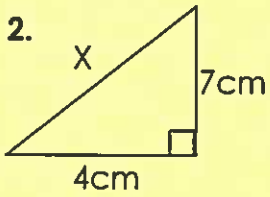

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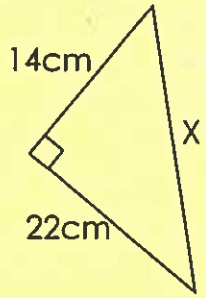

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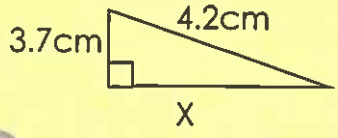

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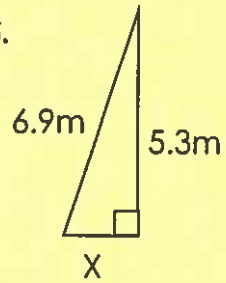

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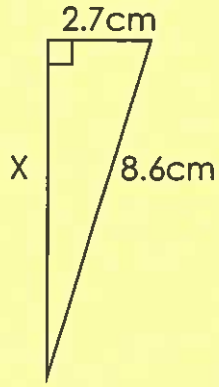

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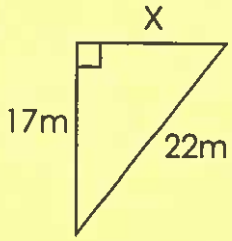

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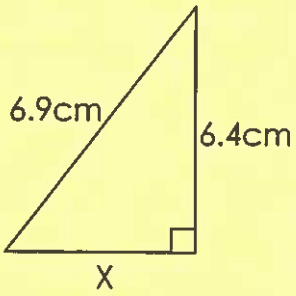

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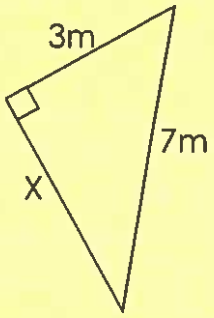


What is the length of the missing side of the following right angle triangles? **Show all work!**

10. a = 3 ; b = 4 ; c = ?

11. a = 6 ; b = 8 ; c = ?

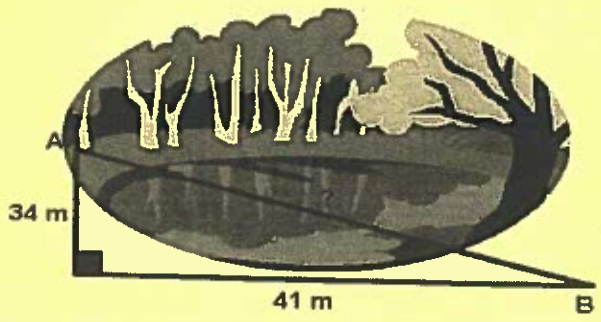
12. a = 12 ; b =? ; c = 22

13. a = 9 ; b = ? ; c = 13

14. a = ? ; b = 20 ; c = 23

15. a = ? ; b = 10 ; c = 17

16. To get from point A to point B you must avoid walking through a pond. To avoid the pond, you must walk 34 meters south and 41 meters east. To the *nearest meter*, how many meters would be saved if it were possible to walk through the pond?



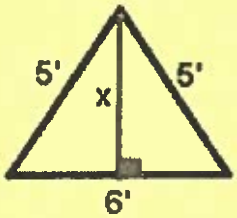
17. A baseball diamond is a square with sides of 90 feet. What is the shortest distance, to the *nearest tenth* of a foot, between first base and third base?

18. A suitcase measures 24 inches long and 18 inches high. What is the diagonal length of the suitcase to the *nearest tenth* of a foot?

19. In a computer catalog, a computer monitor is listed as being 19 inches. This distance is the diagonal distance across the screen. If the screen measures 10 inches in height, what is the actual width of the screen to the *nearest inch*?

20. Two joggers run 8km north and then 5km west. What is the shortest distance, to the *nearest tenth* of a kilometer, they must travel to return to their starting point?

21. Oscar's dog house is shaped like a tent. The slanted sides are both 5 feet long and the bottom of the house is 6 feet across. What is the height of his dog house, in feet, at its tallest point?



22. Seth made a small rectangular table for his workroom. The sides of the table are 1.3m and 2.8m. What is the length of the diagonal of the table?

DISTANCE FORMULA $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

Use this formula to compute the distance between the following points:

1. (1,1) and (3,7)

2. (-1,5) and (2,9)

3. (5,7) and (11, -1)

4. (2,2) and (7,7)