College Mathematics

Euclidean geometry homework

Round all answers to the nearest *tenth* of a unit.

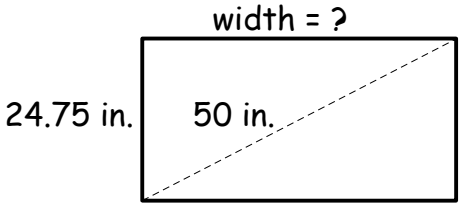
In #1-5, lengths of two sides of a right triangle are given.
Calculate the unknown length.

1. a = 15 ft., b = 20 ft., c = ?
2. a = 7 mi., b = ?, c = 25 mi.
3. a = 10 in., b = 7 in., c = ?
4. a = ?, b = 5 cm., c = 8 cm.
5. a = 1 m., b = ?, c = 2 m.

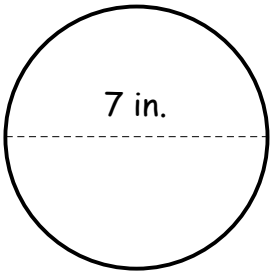
6. How long is a diagonal of a 3"-by-5" rectangle?

7. If a rectangular TV screen is 10.2" high and 13.6" wide, what is the diagonal length?

8. A widescreen TV display has a 50-inch diagonal and is 24.75 inches tall.
   How wide is the display?



9. A circle has a 7-inch diameter.
   (a) Calculate the radius.
   (b) Calculate the circumference.
   (c) Calculate the area inside the circle.



10. A bicycle wheel has a 27-inch diameter.
    If a bug were to walk all the way around the wheel once, how far would it walk?

11. What is the area of a rectangular carpet measuring 14 feet by 12 feet?

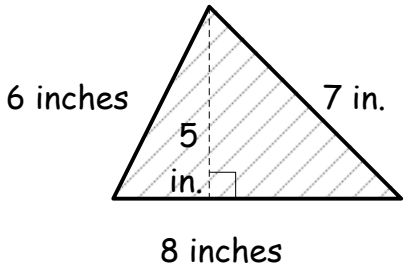
12. What is the area inside a triangle with a base of 14 feet and a height of 12 feet?

13. What is the area inside a circle with a radius of 7 feet?

14. What is the area inside a circle with a 10-foot diameter?

15. (a) Calculate the <u>perimeter</u> of this triangle.

    (b) Calculate the <u>area</u> inside this triangle.



16. The diameter of the earth is about 8000 miles.
    If you fly around the equator, about how many miles will you fly?

17. A circular rug measures 5 feet across. What is the area of the rug?

18. A round window has a 42-inch diameter.
    About how many 1"-by-1" squares of window tint will it take to cover the window?

19. A circular swimming pool has a 40-foot radius.
    How many square feet of canvas would be needed to make a cover for the pool?

20. A cheesecake has a 9-inch diameter.
    How long a piece of ribbon would be needed to wrap around the cheesecake?

21. A cheesecake has a 9-inch diameter.
    How many 1-square-inch chocolates are needed to cover the top of the cheesecake?

22. A freezer is 2 feet tall, 3 feet deep, and 4 feet wide.
    How many 1-cubic-foot blocks of ice would fit in this freezer?

23. (a) Draw a picture showing two circles that intersect at no point.
    (b) Draw a picture showing two circles that intersect at only one point.
    (c) Draw a picture showing two circles that intersect at exactly two points.
    (d) Draw a picture showing two circles that intersect at infinitely many points.
    (e) Are these the only ways that two circles can intersect?