



Why?

Why aren't manhole covers square?

Figure This! Why are manhole covers round?

Hint: Investigate different shaped covers to see if they can fall through their corresponding holes.

The shapes of many objects relate directly to their uses. Tools are designed with shapes that are easy to hold, furniture is designed with shapes that are comfortable, and race cars are designed to reduce wind resistance.



Answer: Square manhole covers can be tipped diagonally and fall through the hole.

For more information, visit our Web site
www.figurethis.org



Produced by the
National Council of Teachers of Mathematics
Designed by
The Widmeyer-Baker Group
and the
National Council of Teachers of Mathematics
Jointly Funded by
The National Science Foundation
and
The U.S. Department of Education

This material is based upon work supported by the National Science Foundation and the U.S. Department of Education under Grant No. ESI9813096. Any opinions, findings, conclusions, or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation or the U.S. Department of Education.

Figure This!
Math Challenges for Families



How come the math my child brings home doesn't look like the math I remember?

If you don't recognize the math in your child's homework, think about how the world has changed since you were in school. The math looks different because the world is different.

Advances in science, technology, information processing and communication, combined with the changing workplace, make it necessary for all students to learn more math.



The basics are changing. Arithmetic skills, although important, are no longer enough.

To succeed in tomorrow's world, students must understand algebra, geometry, statistics, and probability. Business and industry demand workers who can—

- solve real world problems,
- explain their thinking to others,
- identify and analyze trends from data, and
- use modern technology.



The mathematics students do in middle school should prepare them for the new basic skills necessary for their futures.

Instead of worksheets, your child may bring home problems to investigate that are related to real life—investigating salaries, life expectancy, and fair decisions, for example.

Giving students opportunities to learn real math maximizes their future options.

Check with your school to make sure the math your child is learning today is the math they need for tomorrow's world. After all, the future is closer than it may appear.