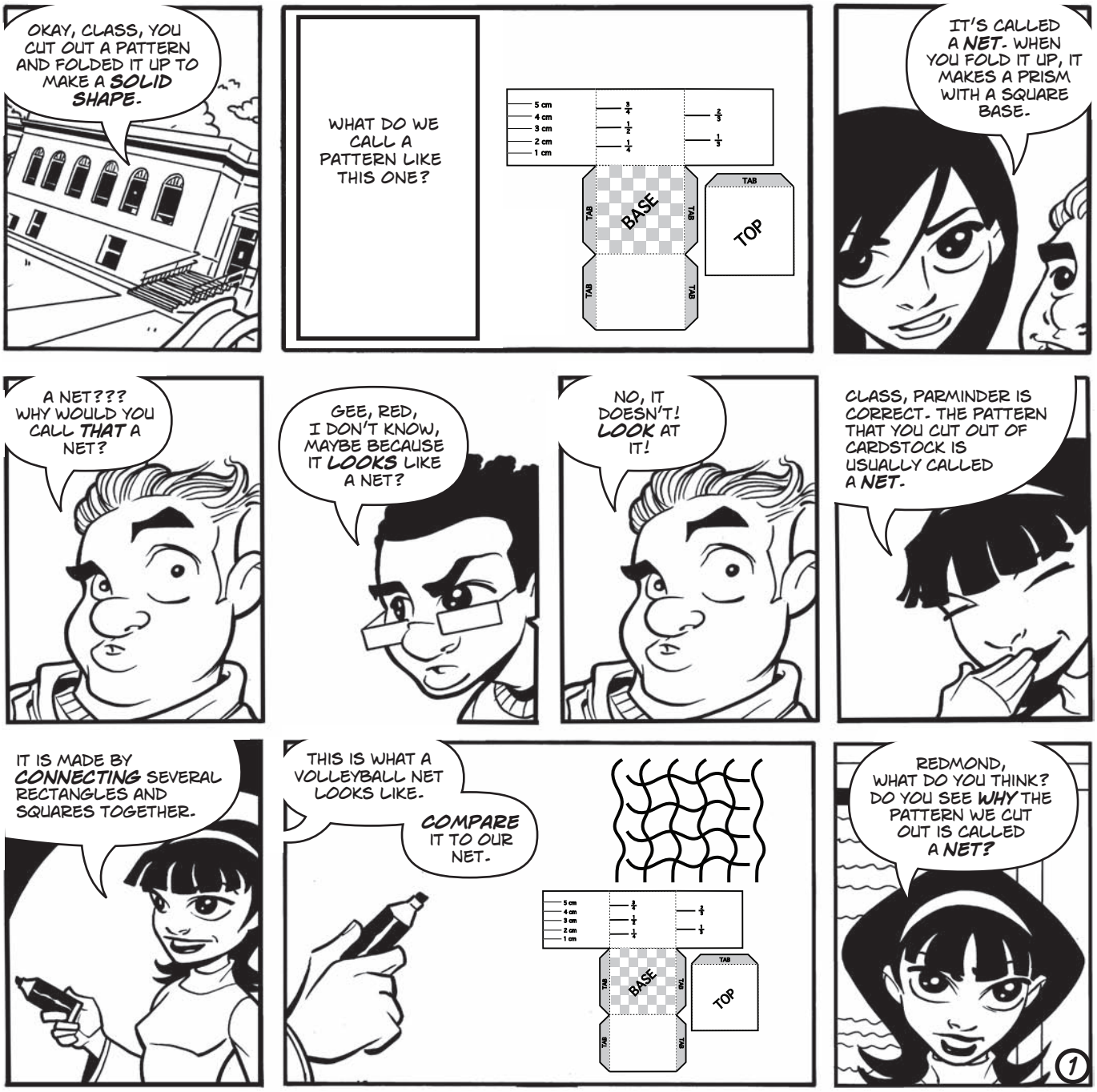
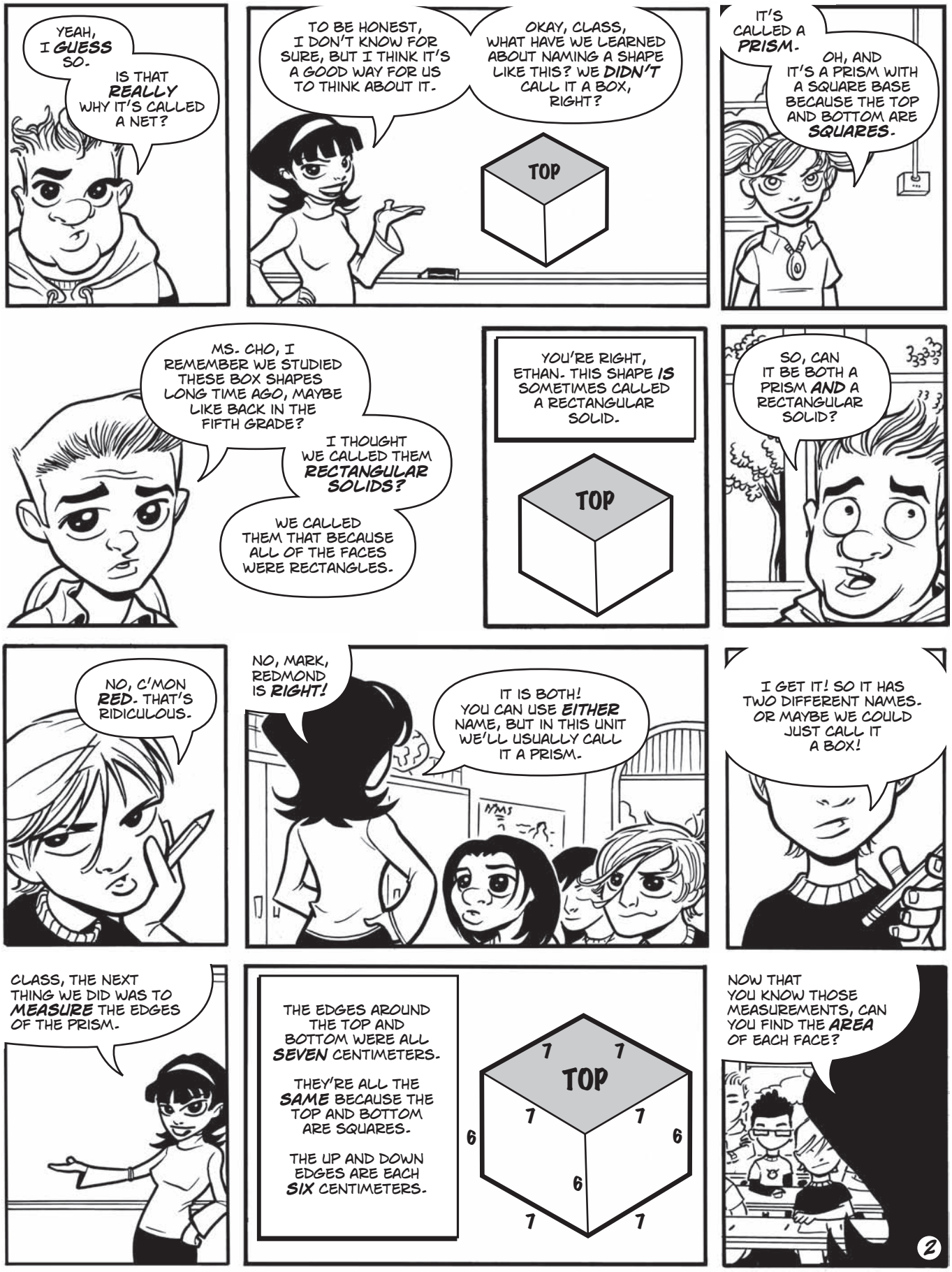
Box Building

Things to look for:

1. What is meant by the word "net"?
2. What is the meaning of surface area?
3. How can you use length, width, and height of a square-based pyramid to find its surface area?





THE TOP AND BOTTOM EACH HAVE AN AREA OF 49 SQUARE CENTIMETERS, WHICH IS **7 TIMES 7**.

THE OTHER FOUR FACES ARE RECTANGLES THAT ARE **6 BY 7**, SO THE AREA OF EACH OF THOSE RECTANGLES IS 42 SQUARE CENTIMETERS.

OKAY, SO, WHAT DO YOU GET WHEN YOU ADD UP THE AREAS OF THE **SIX FACES** OF THIS PRISM?

WHEN YOU ADD THEM ALL UP, YOU GET **266**.

266 **WHAT?** WHAT ARE THE AREA UNITS?

OH, YEAH. THEY'RE SQUARE **CENTIMETERS**. THE TOTAL AREA IS 266 SQUARE CENTIMETERS.

CLASS, WE CALL THAT THE **SURFACE AREA** OF THE PRISM.

EACH FACE OF THE PRISM IS A FLAT SURFACE, AND ALL OF THESE FACES TOGETHER ARE THE **SURFACE OF THE PRISM**.

WHEN YOU ADD UP THE AREAS OF THESE SIX FACES, THAT'S THE AREA OF THE SURFACE OF THE PRISM, OR THE **SURFACE AREA**.

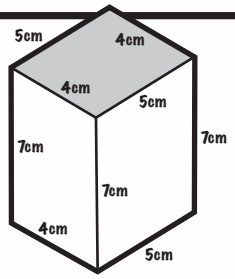
YOU SURE SAID THE WORD **SURFACE** A LOT.

YOU KNOW, REDMOND, I DID THAT ON PURPOSE.

WE'RE GOING TO BE USING THIS IDEA OF **SURFACE AREA** OVER AND OVER AGAIN IN THIS UNIT. I WANT TO MAKE SURE THAT YOU KNOW WHAT IT MEANS.

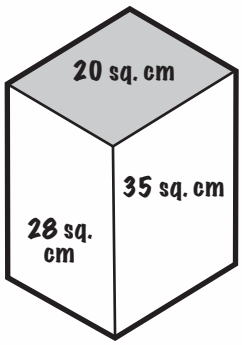
surface area

LET'S FIND THE SURFACE AREA OF ONE MORE PRISM. NOTICE THAT THE BASES ARE **RECTANGLES**.



THE TOP AND BOTTOM BOTH HAVE AN AREA OF **20**, ANOTHER TWO OF THE FACES EACH HAS AN AREA OF **35**, AND THE OTHER TWO EACH HAS AN AREA OF **28**.

WHEN YOU ADD THEM UP, YOU GET **166**. SO, THE SURFACE AREA IS **166** SQUARE CENTIMETERS.



20
20
28
28
35
35
166

EVERYBODY GOT IT?

GREAT JOB, CLASS!

