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GRE数学

4.2 立体几何

MAKE IT EASY

4.2.1长方体

Volume=length*width*hight=l*w*h

Surface Area=2lh+2lw+2hw=2(lh+lw+hw)

4.2.1立方体

Volume=a^3

Surface Area=$6a^2$

4.2.1圆柱体

Volume= $\pi r^2 h$

Surface Area= $2\pi r^2 + 2\pi rh$

4.2.4练习

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1. A rectangular solid P has height 2c and a base of width a and length b. Two other rectangular solids, Q and R, each have height c and bases of width a and length b. Which of the following represents the amount by which the sum of the surface areas of Q and R exceeds the surface areas of P?

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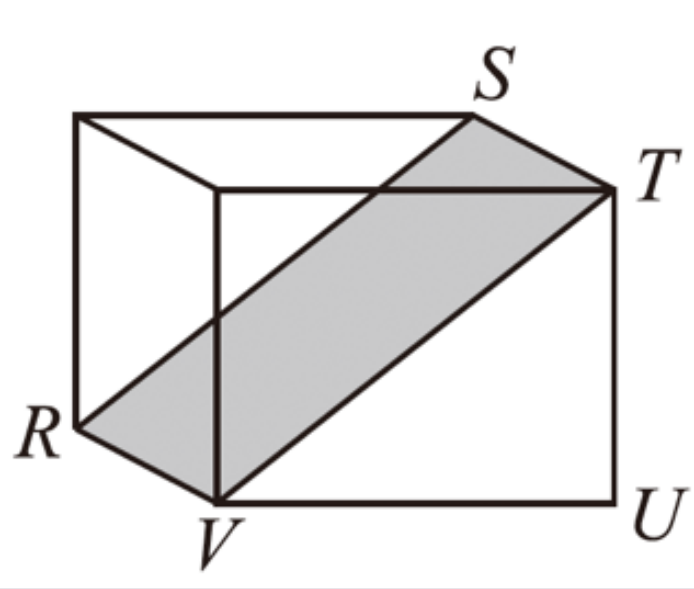
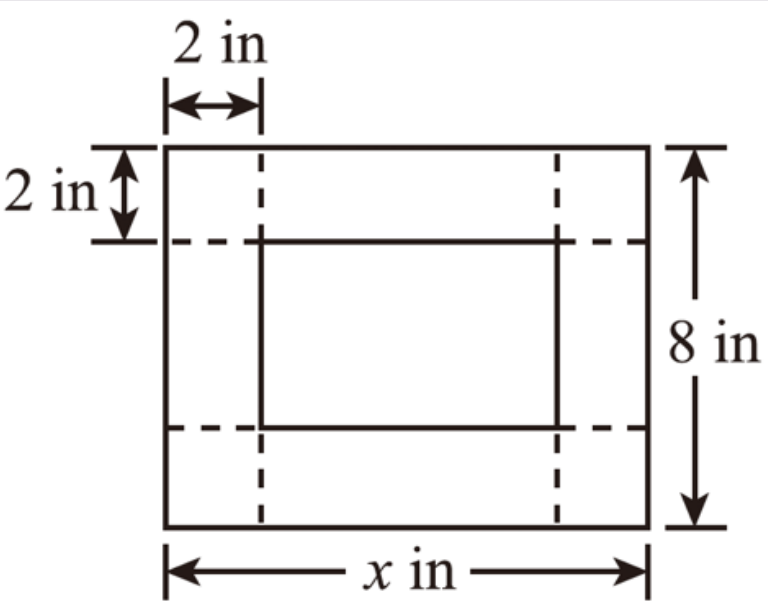
2. In the rectangular solid below, TU=3, UV=4, and VR=2. What is the area of the shaded rectangular region?



3. The thin rectangular sheet of metal shown in the figure is 8 inches wide and x inches long. An open box is to be made by cutting a 2 inch square from each corner of the sheet of metal and then folding up the sides. If the volume of the box is to be 48 cubic inches, what is the value of x?



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4. The volume V of a right circular cylinder is $V=\pi \cdot r^2 h$, where r is a radius of the base and h is the height of the cylinder. If the volume of a right circular cylinder is 45π and its height is 5, what is the circumference of its base?

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5. The interior dimensions of a rectangular tank are as follows: length 110 centimeters, width 90 centimeters, and height 270 centimeters. The tank rests on level ground. Based on the assumption that the volume of water increases by 10 percent when it freezes, which of the following is closest to the maximum height, in centimeters, to which the tank can be filled with water so that when the water freezes, the ice would not rise above the top of the tank?

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Thanks

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