

# What Do You Have When a Teacher Tells Two Students to Stop Talking and Do Their Work ?



Solve each problem and find your answer in the rectangle below. Cross out the box that contains your answer. When you finish, write the letters from the remaining boxes in the spaces at the bottom of the page.

**1** The amount of money earned on a job is directly proportional to the number of hours worked. If \$36 is earned for 8 hours of work, how much is earned for 30 hours of work?

\$ \_\_\_\_\_

**2** The height that a ball bounces varies directly with the height from which it is dropped. A certain ball bounces 30 cm when dropped from a height of 50 cm. How high will the ball bounce if dropped from a height of 120 cm?

\_\_\_\_\_ cm

**3** The amount that a spring stretches is directly proportional to the weight of the object attached to it. If a spring is stretched 10 cm by a weight of 8 kg, how much will it be stretched by a weight of 3 kg?

\_\_\_\_\_ cm

**4** The number of calories in a container of milk is directly proportional to the amount of milk in the container. If there are 160 calories in an 8-ounce glass of milk, find the number of calories in a 15-ounce glass of milk.

\_\_\_\_\_ cal

**5** The number of kilograms of water in a person's body varies directly as the person's mass. A person with a mass of 90 kg contains 60 kg of water. How many kilograms of water are in a person with a mass of 50 kg?

\_\_\_\_\_ kg

**6** On a certain map, 25 km are represented by 2 cm. If two cities are 7 cm apart on the map, what is the actual distance between them?

\_\_\_\_\_ km

**7** The amount of fertilizer needed for a lawn varies directly with the area of the lawn. If 4 pounds of fertilizer are needed for 500 square feet of lawn, how much is needed for Dr. Quagmire's lawn, which is rectangular in shape and measures 25 feet by 50 feet?

\_\_\_\_\_ lb

TW	A	TW	NO	OS	WO	RD
3.75	9.4	10	324	$33.\bar{3}$	72	76
ER	NE	ED	IT	PA	N	IR
$31.\bar{6}$	300	144	135	83.5	87.5	4.2

# How Did Everybody Find Out About the New Corduroy Pillow Covers ?

Solve each problem below. Find your answer in the answer column and notice the letters next to it. Write these letters in the boxes at the bottom of the page that contain the number of that exercise.

- ① For rectangles with the same area, the length varies inversely as the width. One rectangle has a length of 12 cm and a width of 5 cm. Find the length of another rectangle with the same area whose width is 4 cm.

\_\_\_\_\_ cm

- ② The current in an electrical circuit varies inversely as the amount of resistance in the circuit. The current is 10 amps when the resistance is 24 ohms. Find the current when the resistance is 30 ohms.

\_\_\_\_\_ amps

- ③ The cost per person to rent a mountain cabin is inversely proportional to the number of people who share the rent. If the cost is \$36 per person when 5 people share, what is the cost per person when 8 people share?

\$ \_\_\_\_\_

- ④ The volume of a gas varies inversely as the pressure. A helium-filled balloon has a volume of 21 m<sup>3</sup> at sea level, where the pressure is 1 atmosphere. The balloon rises to an altitude where the pressure is 0.7 atmospheres. What is its volume?

\_\_\_\_\_ m<sup>3</sup>

- ⑤ The number of chairs on a ski lift is inversely proportional to the distance between them. A lift has 70 chairs when they are spaced 24 m apart. If 80 evenly-spaced chairs are used on the lift, how much space will be left between them?

\_\_\_\_\_ m

- ⑥ For piano wires under the same tension, the number of vibrations per second (frequency) of each wire is inversely proportional to the length of the wire. A wire 0.75 m long vibrates 480 times per second. How long is a wire that vibrates 300 times per second?

\_\_\_\_\_ m

- ⑦ The time it takes to fly from Los Angeles to New York varies inversely as the speed of the plane. If the trip takes 6 h at 900 km/h, how long would it take at 800 km/h?

\_\_\_\_\_ h



DEH	1.2
EWS	36
MA	15
RTU	7.2
TH	22.50
EY	21
RKS	1.35
EA	8
DLI	6.75
IS	19
NES	30
IT	24.50

3	3	5	5	1	1	6	6	6	2	2	7	7	7	4	4	4
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