1. When Mr. Lee purchased his car, it had a value of $15,000. In each of the first 2 years after he purchased it, its value decreased by 10% of the previous year's value, as shown in the table below.

Decrease in Value of Mr. Lee's Car

Number of Years After Purchase	Value of Car
0	$15,000
1	$13,500
2	$12,150
3	?

If the value of Mr. Lee's car continues to decrease each year by 10% of the previous year's value, what will be the value of his car 3 years after he purchased it?

A) $1,215   B) $4,500   C) $10,500   D) $10,935

WESTBROOK HIGH SCHOOL
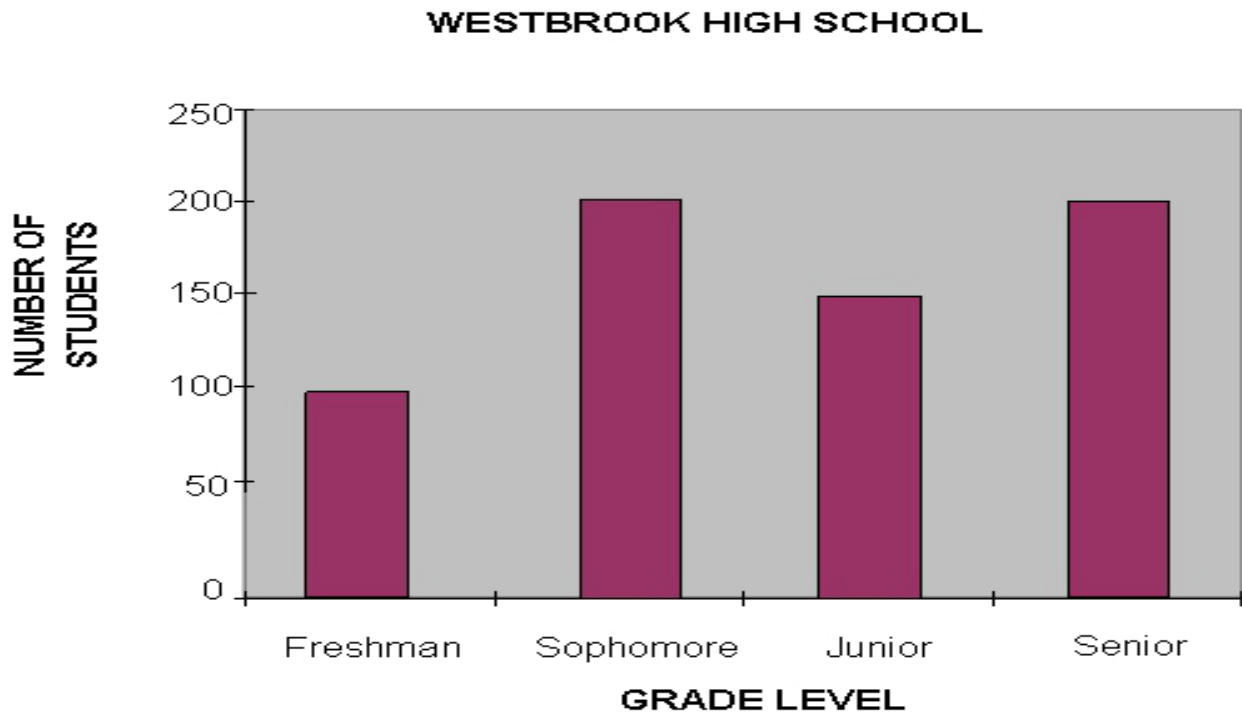
2. The graph above shows the distribution of students in each grade at Westbrook High School. Using the graph, what is the ratio of freshmen to sophomores?

A) 1: 2   B) 1: 3   C) 2:1   D) 3:1

3. As gifts, Billy bought 5 pairs of shoes for $225. Later, he bought another pair of shoes for himself. He spent an average of $45.84, including tax, for the 6 pairs of shoes. **How much did Billy spend on his pair of shoes?**

A) $37.50   B) $45.00   C) $50.04   D) $45.14

4. Billy deposits $800 in a local bank. He knows that, due to interest, his money will be increased by 5% at the end of each year. **How much money will Billy have at the end of two years, assuming he makes no deposits or withdrawals?**

A) $840   B) $880   C) $882   D) $1,680

5. Howard lives 4 miles from school and decides to ride his bike to school one day. He knows that he can ride his bike at about 10 miles/hour. **Which is the best answer for the amount of time it will take Howard to ride to school?**

A) 13 minutes B) 18 minutes C) 24 minutes D) 32 minutes

6. Henry has a model of a train from the early 1900s. The ratio of the size of the model to the size of a real train is 3:80. If the door on the model is 4 inches tall, **how tall is the door on the real train?**

A) $27\frac{2}{3}$ inches   B) $89\frac{1}{3}$ inches   C) $106\frac{2}{3}$ inches   D) 320 inches

7. The ratio of balloons to guests at a party is 12:5. If there are 30 guests, **how many balloons are there?**

A) 12   B) 47   C) 72   D) 360

8. What is another way to represent 3% ?

A) .3   B) 3   C) .03   D) $\frac{1}{3}$

9. Salina wants to buy a dress that sells for $55.00. If the sales tax is 8%, **exactly how much will the dress cost?**

A) $44.00   B) $55.44   C) $59.40   D) $99.00

10. A local department store had a Saturday special. It offered an additional 25% discount on shirts that were already marked down 50%. **How much did Megan pay for a sweater that originally sold for $40?**

A) $10   B) $15   C) $20   D) $30

11. What is the <u>best</u> answer of a 6% sales tax on a $14.99 compact disc?

A) $.06   B) $.60   C) $.90   D) $14.09

12. Given the proportion $\dfrac{x}{y} = \dfrac{a}{b}$, **which of these statements is always true?**

A) ax = by   B) ay = bx   C) a + b = x + y   D) $a^2 + y^2 = x^2 + b^2$

13. Tom reports that the ratio of teachers to students at South High School and North High School is the same. There are 45 teachers and 720 students at South High School. **How many teachers are there at North High School if there are 560 students?**

A) 29 teachers   B) 35 teachers   C) 40 teachers   D) 58 teachers

14. In Mrs. William's algebra class, the ratio of girls to total number of students is $\dfrac{17}{30}$. **What is the ratio of boys to girls in the class?**

A) $\dfrac{13}{17}$ B) $\dfrac{13}{30}$ C) $\dfrac{17}{13}$ D) $\dfrac{30}{13}$

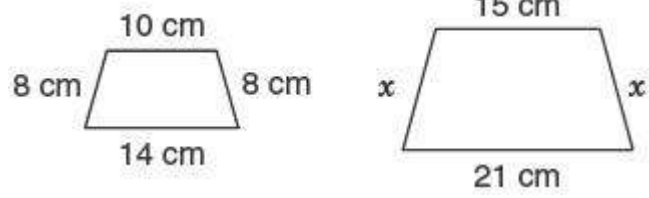**15. Which equation corresponds to the given table of values?**

x	y
-5	4
-3	3
3	0
5	-1

A) y = -x + 1   B) y = 2x + 14   C) y = -0.5x + 3   D) y = -0.5x + 1.5

16. For every dollar Oscar earns, he saves $0.12. Oscar has saved $41.40. **How much has Oscar earned?**

A) $41.28   B) $41.52   C) $345.00   D) $4,968.00

17. **What must the value of x be in order for the figures below to be similar?**

10 cm
8 cm   8 cm
14 cm

15 cm
x x
21 cm

A) 16 cm   B) 14 cm   C) 12 cm   D) 10 cm