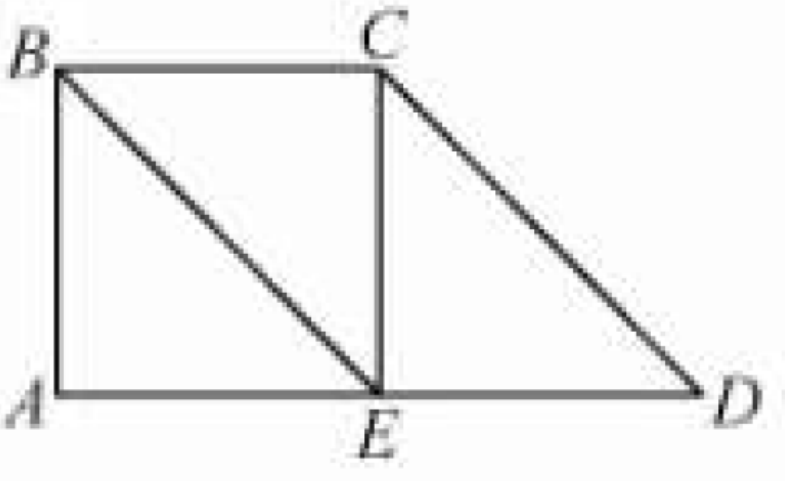
新东方在线

GRE数学

综合练习2-Section 1

M A K E I T E A S Y

1. ABCE is a square, and BCDE is a parallelogram.
Quantity A: The area of square ABCE
Quantity B: The area of parallelogram BCDE



2. n is an integer.

Quantity A: $(-1)^n(-1)^{n+2}$

Quantity B: 1

3. The population of Country X for 1980 was p . The population of Country X increased by 3.8 percent in each of the next two years.

Quantity A: The population of Country X for 1982

Quantity B: 1.076p

4. $x \neq 0$

Quantity A: x^2

Quantity B: $x(x+5)$

5. x=2, y=3,z=5

Quantity A: $x^{-1}yz^{-2}$

Quantity B: $(\frac{xz}{y})^{-2}$

6. x< y-2

Quantity A: The average (arithmetic mean) of x and y

Quantity B: y-1

7. x is an integer greater than 3.

Quantity A: The number of even factors of 2x

Quantity B: The number of odd factors of 3x

8. If (a,b) is a point in the xy-plane, then the distance between (a,b) and the x-axis is $|b|$ and the distance between (a,b) and the y-axis is $|a|$.

Quantity A: The total number of points Pin the xy-plane such that the distance between P and one of the axes is 10 and the distance between P and the other axis is 8

Quantity B: The total number of points Q in the xy-plane such that the distance between Q and one of the axes is 5 and the distance between Q and the other axis is 4.

9. For a sample of 210 households, one-third of the households do not have any pets, one-third of the households each have 1 pet, and the rest of the households each have 2 pets. Which of the following statistics for the sample are equal to 1?

Indicate all such statistics.

10. According to a tax rate formula for a certain year, the amount of tax owed by an individual whose annual income was between $31,850 and $77,100 was equal to a base tax of $4,386 plus 24 percent of the annual income that exceeded $31,850. According to this formula, what was the amount of tax owed by an individual whose annual income that year was $42,000?

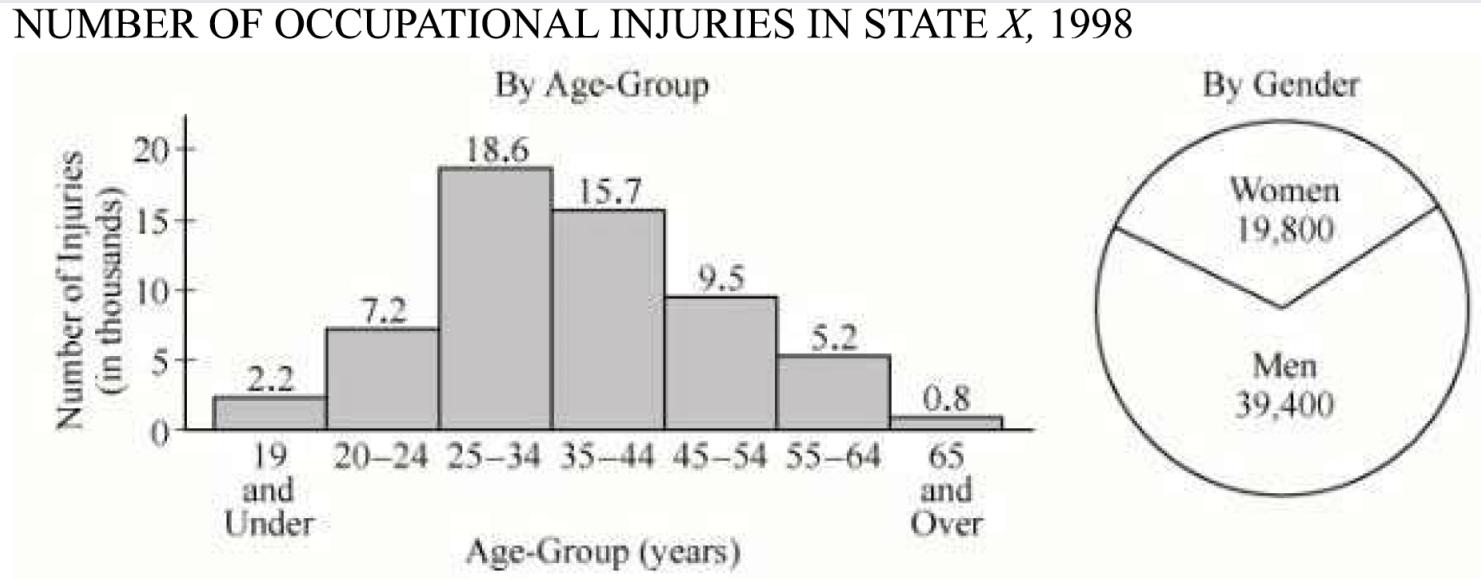
11. Each week a salesperson receives a commission that is equal to 12 percent of the first $500 of sales plus 20 percent of additional sales. If the salesperson received a commission of $380 last week, what was the total amount of the sales that the salesperson made last week?

12. Last Monday a certain store sold 17 wrenches at x dollars each. Last Tuesday the store reduced its prices and sold an additional 8 wrenches at 0.5x dollars each. Which of the following is equal to the average (arithmetic mean) price, in dollars, of the 25 wrenches that the store sold last Monday and Tuesday?

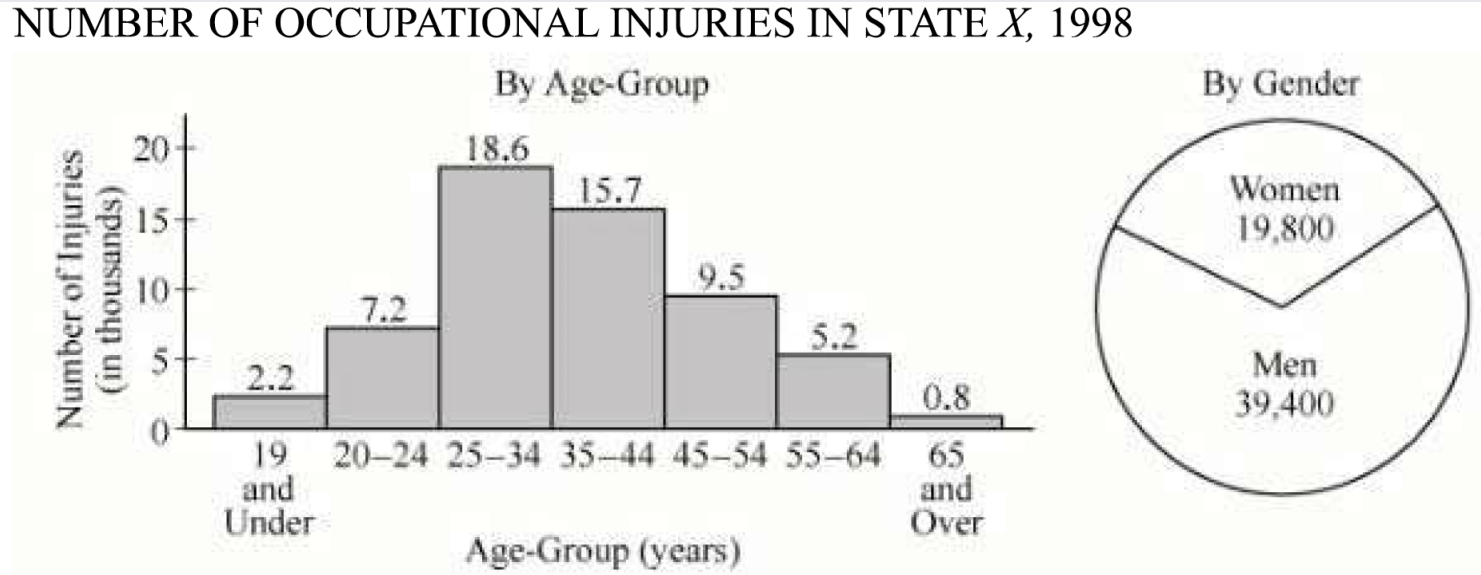
13. In a distribution of 8,500 different measurements of the variable x, 26.5 is the 56th percentile and 37.1 is the 78th percentile. Which of the following is closest to the number of measurements of x that are in the distribution such that $26.5 \leq x \leq 37.1$?

14. How many of the age-groups each accounted for more than 15 percent of the total number of occupational injuries in State X in 1998?

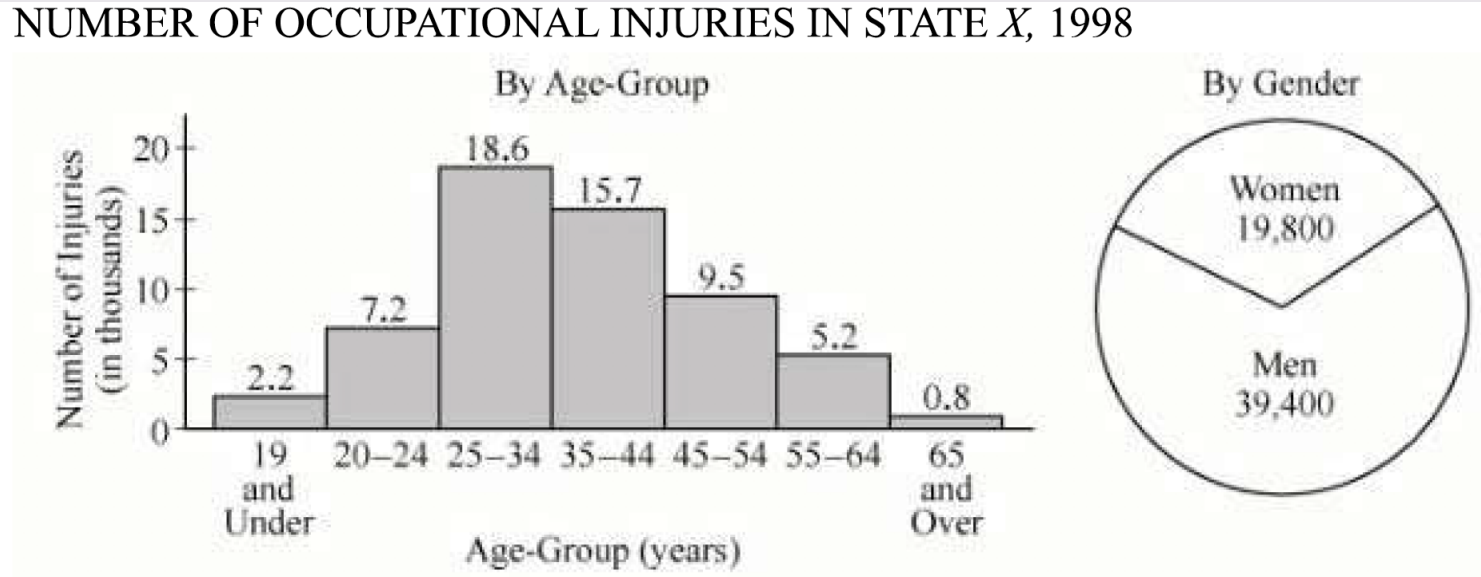
NUMBER OF OCCUPATIONAL INJURIES IN STATE *X*, 1998



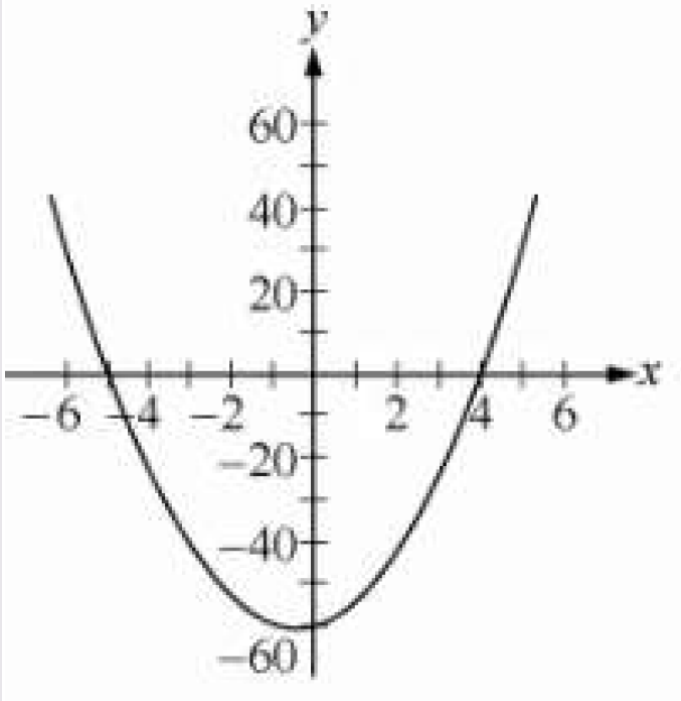
15. In 1998, if one-half of the occupational injuries in the combine 34-and-under age-groups were incurred by men, what was the number of occupational injuries incurred by men in the combined 35-and-over age-groups?



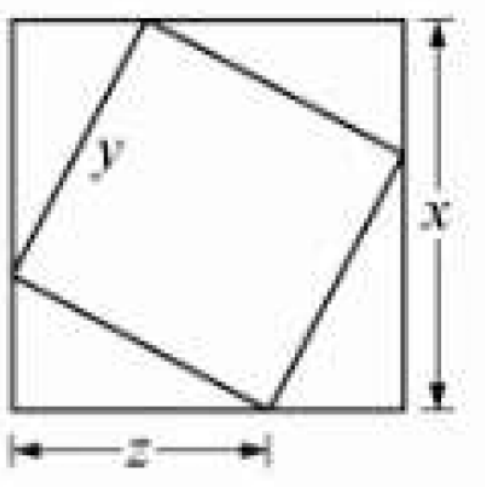
16. For the 55-64 age-group in 1998, the average (arithmetic mean) number of work-hours lost per occupational injury was 48.5. If a workweek is 40 work-hours, which of the following is closets to the total number of workweeks lost due to occupational injuries in the 55-64 age-group in 1998?



17. Which of the following could be the equation of the graph in the xy-plane shown above?



18. The figure shows a smaller square with sides of lengthy inscribed in a larger square with sides of length x. Which of the following relationships between x, y, and z must be true ?



19. The table shows the frequency distribution of the random variable X What is the median of the distribution of the values of X?

X	Frequency
0	6
1	11
2	18
3	23
4	15

20. The functions f and g are defined by f(x) =$|2x + 1|$ and g(x)=3 for all numbers x. What is the least value of c for which f(c) = g(c)?

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Thanks

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