



# GRE Quantitative Workshop Handout



---

## Table of Contents:

Directions.....	1
Section 1.....	1
Section 2.....	2
Answers.....	4

\* **Numbers:** All numbers used are real numbers.

For all real numbers a, let  $a^* = 2-a$

**Figures:** Positions of points, angles, regions, etc. can be assumed to be in the order shown; and angle measures can be assumed to be positive.

Lines shown as straight can be assumed to be straight.

Figures can be assumed to lie in a plane unless otherwise indicated.

Figures that accompany questions are intended to provide information useful in answering the questions. However, unless a note states that a figure is drawn to scale, you should solve these problems NOT by estimating sizes by sight or by measurement, but by using your knowledge of mathematics.

**Directions:** For the first section, each column will have a quantity. You will need to compare the two quantities and choose from the following:

- Choose A if the quantity in column A is greater than the quantity in column B;
- Choose B if the quantity in column B is greater than the quantity in column A;
- Choose C if the two quantities are equal.
- Choose D if the relationship between the two quantities cannot be determined by the information given.
- Although on the actual GRE Paper based exam there may be a choice E you should NEVER choose it.

**Common Information:** Some questions have information centered above the two columns. This information may pertain to one or both columns and should be taken into consideration when determining your response.

3.  $((-2)^*)^*$  4\*

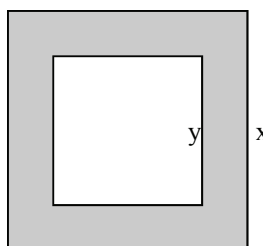
---

4.  $1 - \frac{1}{16}$   $\frac{7}{8} + \frac{1}{64}$

---

5.  $x^3 + 5$   $\sqrt{x^6 + 10x^3 + 25}$

---



x = side of outer square  
 y = side of inner square  
 Area of inner square and shaded area are equal.

6.  $\frac{x}{y}$  1

---

Rick and James each bought an iPod at 15% off the original price of \$310. Rick's cashier took 15% off the price and then added a sales tax of 7.5%. James's cashier added the sales tax of 7.5% and then took off 15%.

7. Final price of Rick's iPod Final price of James's iPod

---

Volume of a cube is 125

8. Area of Base of the cube 20

---

One day, three friends, Adam, Emily and Kevin went to the grocery store in order to buy some fruit. Adam paid \$2.00 for 8 oranges and 8 pears. Emily paid \$1.80 for 6 oranges and 12 apples. Kevin paid \$1.40 for 5 apples and 6 pears.

9. The cost of 2 apples and 3 pears The cost of 3 oranges and 2 pears

---

COLUMN A

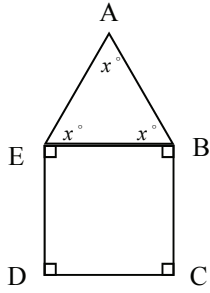
COLUMN B

1.  $(x)^2 (x)^4$   $x^8$

---

2.  $9^8$  100,000,000

---



Area of Square BCDE = 25

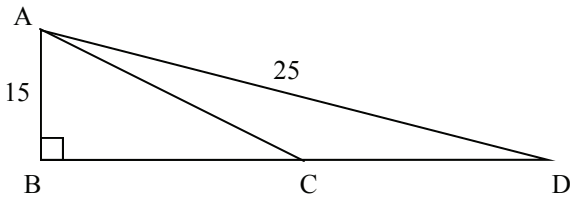
10. Perimeter of ABCDE                      Area of BCDE

\_\_\_\_\_

$$|2 - 3| = -x$$

11.                      x                                      2 - 3

\_\_\_\_\_



Area of  $\triangle ABC = 75$

12.                       $\overline{BC}$                                        $\overline{CD}$

\_\_\_\_\_

**Directions:** For this section, each question will have five answer choices. For each question, select the best answer from the choices given.

13. If  $8x + 4 = 5x + 19$  then  $6x =$

- (A)  $\frac{23}{13}$
- (B) 5
- (C) -5
- (D) 30
- (E) 18

14. The average of 5 consecutive integers is 15. What is the sum of the least and the greatest?

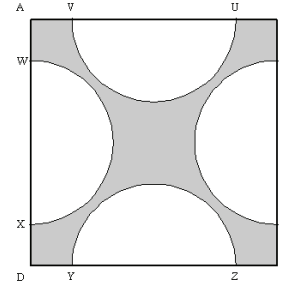
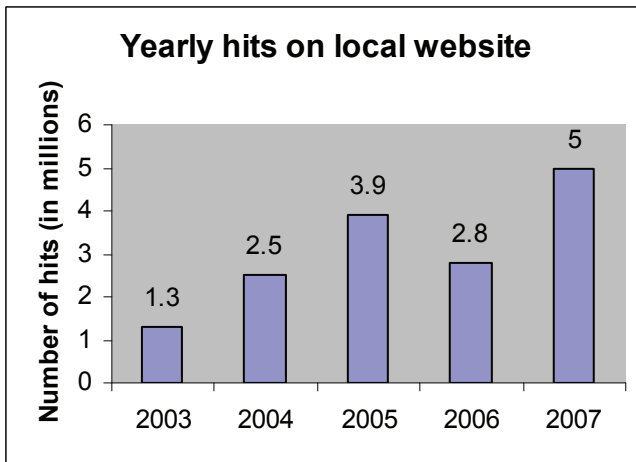
- (A) 17
- (B) 30
- (C) 15
- (D) 75
- (E) none

15. If  $x > 0$  and  $y > 0$  which of the following is equivalent to

$$\frac{x^2}{y} \sqrt{\frac{y^4}{x^3}}$$

- (A)  $\sqrt{\frac{y^3}{x}}$
- (B)  $\sqrt{\frac{x+y}{y+x^2}}$
- (C)  $\sqrt{y^2x}$
- (D)  $\sqrt{\frac{y^4}{x^2}}$
- (E)  $\frac{1}{2}$

The following graph illustrates the number of hits (in millions) per year on a local web site. Use the graph to answer questions 16-17.



16. From 2004 to 2005 the number of hits increased by

- (A) 14 %
- (B) 56 %
- (C) 35 %
- (D) 65 %
- (E) 45 %

17. The number of hits per year increased an average of how many hits per year from 2003 to 2007

- (A) 3,100,000
- (B) 3,875,000
- (C) 925,000
- (D) 1,200,000
- (E) 740,000

18. Which of the following is equal to one-quarter of one half percent?

- (A) .125
- (B) .0125
- (C) .00125
- (D) .000125
- (E) none

19.

In the figure above ABCD is a square whose sides are of length 6. Line segments  $\overline{VU}$ ,  $\overline{WX}$ ,  $\overline{YZ}$ ,  $\overline{TS}$ , are each of length 4 which is also the diameter of the four semi-circles. What is the approximate area of the shaded region? For  $\pi$ , use 3.14.

- (A) 9
- (B) 11
- (C) 12
- (D) 15
- (E) -12

---

Answers:

1. D
2. B
3. C
4. A
5. C
6. A
7. C
8. A
9. A
10. C
11. C
12. C
13. D
14. B
15. C
16. B
17. C
18. C
19. B