GRE数学教程

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教材说明

本GRE系列由《GRE类比·反义词教程》、《GRE填空教程》、《GRE数学教程》、《GRE阅读理解教程》、《GRE写作教程》和《最新GRE笔试模考练习》构成，由全国数十名著名GRE教学和研究专家历经数年集体编撰而成。

由于近年来GRE考试发生了一些变化，例如：作文改为机考了，语文、数学部分改在作文之后考了、词汇题也出现了不少新词，解题速度要求更高了等等。为了帮助广大同学适应上述变化，因此本系列涵盖了近十年的考试精华，尤其是涵盖了2002-2003年的最新考试趋势，真实地剖析和反映了ETS的出题思想及最新动态。

总之，本系列教材的实效性和实战性极强。广大同学只要使用本系列进行艰苦卓绝的训练，就一定能获得较理想的成绩。

2004年12月

目　录

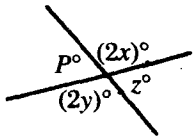
Section 1

A if the quantity in Column A is greater;

B if the quantity in Column B is greater;

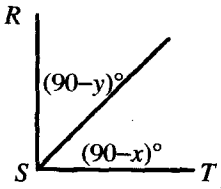
C if the two quantities are equal;

D if the relationship cannot be determined from the information given.

	Column A	Column B
1.	The number of minutes in 24 hours	The number of seconds in 24 minutes
2.	$1{,}300\times0.05$	13×5
	$3x+5=20$ $5y+3=23$	
3.	x	y
4.	 $p+x$	$y+z$
	$x<0<y$	
5.	$x-y$	$y-x$
	l_1, l_2 and l_3 are three lines in space.	
6.	The number of points at which lines l_1 and l_2 intersect	The number of points at which lines l_2 and l_3 intersect
	Yesterday the average(arithmetic mean) number of cars per hour that passed point P was 34 between 1:00 p.m. and 8:00 p.m. and was x between 2:00 p.m. and 7:00 p.m.	
7.	x	34
	$2\leqq y+3\leqq6$	
8.	y	-2

笔记区

9. $\frac{1}{7}+\frac{1}{7}$ | $\frac{1}{6}+\frac{1}{8}$



RS ⊥ ST

10. x | y

6 paneks = 10 regins

1 regin = 25 neugins

1 neugin = 25 endgins

11. 1 panek | 1,025 endgins

$x+y=y$

$xy>y$

12. x | y

The radius and circumference of circle P are r and c respectively.

13. $\frac{r}{c}$ | $\frac{1}{3}$

Two successive discounts of 20 percent and 40 percent are equivalent to a single discount of x percent.

14. x | 52

A.B. and C are points on a line. The distance between A and B is twice the distance between A and C. The distance between C and B is 10.

15. The distance between A and B | 10

16. 5^2 | 2^5

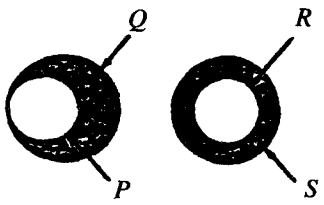


Figure1 **Figure2**

Circles P and R have the same radius and circles Q and S have the same radius.

17. The area of the shaded region in Figure 1 | The area of the shaded region in Figure 2

$a=2$ $b=4$

18. $\frac{ab}{a+b}$ | $\frac{a+b}{ab}$

19. The number of | 1

笔记区

	$\frac{1}{4}$–inch lengths in a 4–inch length	

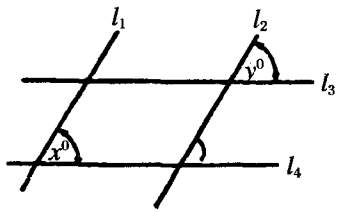
$2(x-5)=10$

20.	x	5

Brand X golf balls cost \$15 for 12 balls.

Brand Y golf balls cost \$9 for 6 balls.

21.	The average (arithmetic mean) cost per ball for the 12 brand X balls	The average (arithmetic mean) cost per ball for the 6 brand Y balls



$l_1//l_2$ **and** $l_3//l_4$

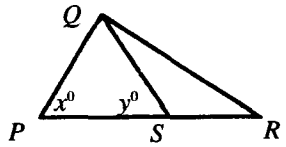
22.	x	y
23.	$(\frac{3}{4})(\frac{4}{5})(\frac{5}{6})$	0.5

$a>b,\ c>d,\ a>c$

24.	b	d
25.	The number of inches in the perimeter of a square region with side of s inches	The number of square inches in the area of a square region with side of s inches

For all real numbers x and y, $x \otimes y = x^2 - y^2$.

26.	$14 \otimes 15$	$15 \otimes 14$



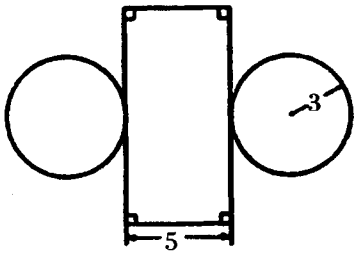
$x>y$

27.	$PQ+QR$	$QS+QR$

The average (arithmetic mean) of 9 numbers is 90. The average (arithmetic mean) of the first 5 of these numbers is 50.

28.	The average (arithmetic mean) of the last 4 numbers	130

笔记区



The figure above shows a cylindrical can that has been cut open and flattened.

29. The volume of the can before it was cut open | 45π

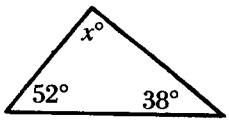
$x>0$

30. $\sqrt{x}$ | $\sqrt{x^2}$

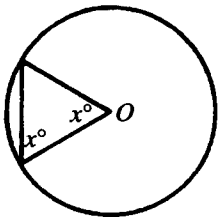
Column A	Column B
31. $\frac{2}{3}$	$\frac{7}{11}$
32. $32+(x+y)$	$x+(y+32)$
33. The circumference of circle S	The diameter of circle S

The sale price of Mrs. Goodnick's house was \$73,000, 6 percent of which she paid to an agent as a commission.

34. The agent's commission | \$\$4,400



35. $5-x$	$x-5$
36. x	80
37. 10% of 60% of x	20% of 30% of x



***O* is the center of the circle**

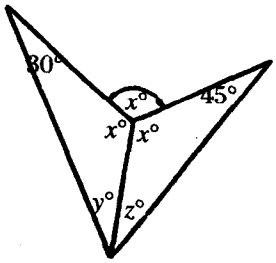
38. x	60

Each person at a party shook hands exactly once with each of the other people at the party. There was a total of 21 handshakes exchanged at the party.

39. The number of people at the party | 8

Column A	Column B

笔记区



40.	y	z
41.	The sum of the 3 greatest distinct integers that are less than 2	The sum of the 2 least distinct integers that are greater than −1
	$\lvert x\rvert+2=5$	
42.	x	−3
43.	The area of a tri angular region with perimeter of 50	The area of a rectangular region with perimeter of 50
	$\frac{x}{y}=\frac{y}{z}=\frac{1}{3}$	
44.	$\frac{x}{z}$	$\frac{1}{3}$

A total of \$480 is in a certain cash register. All of the money is in one-dollar and five-dollar bills, and there are 30 more one-dollar bills than five-dollar bills.

45.	The sum of 30 and the number of five-dollar bills in the cash register	105

Answer:

1.	C C A C B	6.	D D A B D
11.	A A B C D	16.	B C A A A
21.	B C C D D	26.	B B A C D
31.	A C A B D	36.	A C C B A
41.	B D D B C		

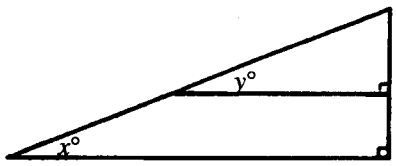
笔记区

Section 2

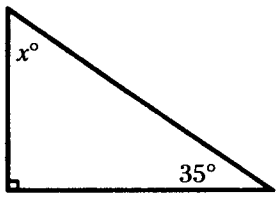
	Column A	Column B
1.	$\sqrt{389}$	20

$$\frac{x^2}{3}=\frac{5}{6}$$

2.	x	3



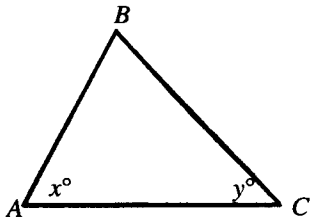
3.	x	y
4.	$\frac{18}{18-15}$	$\frac{18}{18-12}$



5.	x	50

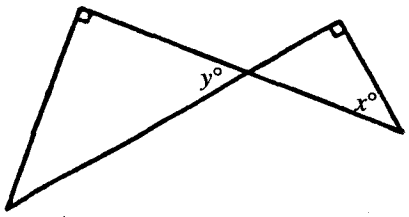
$m<0$

6.	$3(m+15)$	$3m+45$
7.	200.01−0.009	200.1−0.09



笔记区

8.	AC	AB
9.	The distance traveled by a sports car at a speed of 150 kilometers per hour	The distance traveled by a sports car at a speed of 160 kilometers per hour



10.	x	y

A rope, 63 meters long, is cut crosswise into 3 pieces whose lengths are in the ratio 1 to 3 to 5.

11.	The length of the longest piece	34 meters
12.	The number of integers between 15 and 51 that are squares of integers	The number of integers between 6 and 126 that are cubes of integers
13.	The maximum number of solid cubes having edges of length $\frac{1}{2}$ meter that can be placed inside a cubical box having inside edges of length 1 meter	4

$x(x-2)=0$

14.	x	1

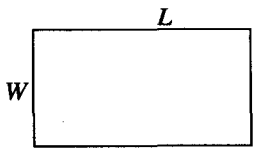
m is an integer.

15.	The remainder when m^3-m is divided by 2	1

	Column A	Column B
16.	500×14	$1{,}000\times7$

$x=10$ and $y=5$

17.	$(x-y)^2$	x^2-y^2



The perimeter of the rectangle above is 16.

18.	$W+L$	4

$x\neq0$

19.	$\frac{x+1}{x}$	$\frac{1}{x}$

A cord that is 20 meters long is cut into three sections.

笔记区

20. The length of the longest section	The sum of the lengths of the two shorter sections

Segments RS and MN intersect at point T and are diameters of the same circle.

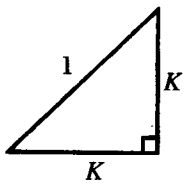
21. The area of $\triangle RTM$	The area of $\triangle STN$

$x>y$

22. $x-y$	0
23. The remainder when 43 is divided by	The remainder when 52 is divided by 7

Cube C has volume 8 cubic centimeters.

24. The area of one of the faces of cube C	3 square centimeters
25. The number of prime numbers greater than 40 and less than 50	The number of prime numbers greater than 10 and less than 20



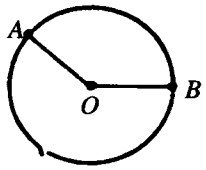
26. K^2	1
27. $2(-x)$	$3x$

$m\neq 2$

28. $\frac{3}{m-2}-1$	$\frac{m-5}{2-m}$

Ms. Smith got an 8 percent cost-of-living raise of \$20 per week.

29. Ms. Smith's new weekly salary	\$260



The circle has center O.

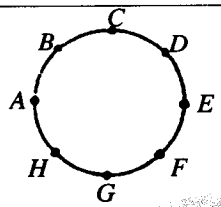
30. Length of minor arc AB	$AO+BO$

Column A	Column B
31. $1-\frac{2}{3}$	$1-\frac{3}{4}$

$3^x=3$

$4^y=4$

32. x	y



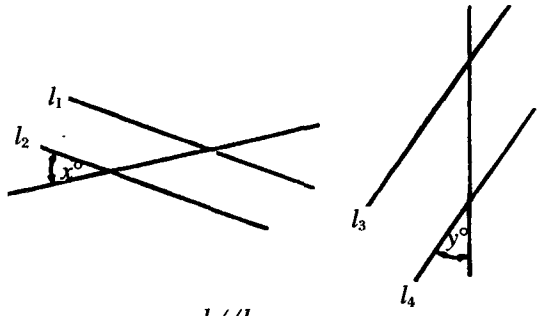
笔记区

The circle above is divided into 8 arcs of equal length.

33.	Length of a line segment from A to D	Length of a line segment from B to E

A total of 400 tickets to a concert were sold, some at \$10 each and some at \$5 each.

34.	The total receipts from the 400 tickets sold	\$3,000
35.	$\sqrt{80}+x$	$9+x$



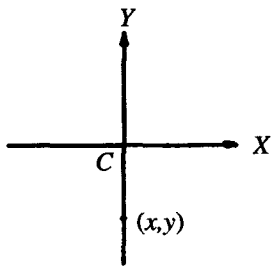
$l_1 // l_2$

$l_3 // l_4$

36.	x	y

$y=x+2$

37.	$y-1$	$x+1$



Note: Drawn to scale.

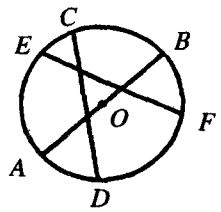
38.	x	y
39.	$\frac{1}{9}\%$	0.11
40.	The difference between 2 num bers, each of which is between 3 and 4	The sum of 2 numbers, each of which is between 1 and 2
41.	$(x+x)^2$	$x^2+2x^2+x^2$
42.	The length of the diagonal of a rectangle with perimeter 20	The length of the diagonal of a rectangle with perimeter 24

$2r=3t$

$t \neq 0$

43.	$\frac{r}{t}$	$r+t$

笔记区



44.	Circumference of the circle with center *O*	Sum of the lengths of chords *AB*, *CD*, and *EF*

Mr. Smith traveled a distance of 100 kilometers, half the distance at 40 kilometers per hour and the other half at 80 kilometers per hour.

45.	Mr. Smith's average speed for the 100 kilometers traveled	60 kilometers per hour

Answer:

1. B B C A A
6. C B D D D
11. A C A D B
16. C B A A D
21. C A C A B
26. B D C A D
31. A C C D B
36. D C A B B
41. C D D A B