

小树老师的数学课

习题篇04

k, n, 12, 6, 17

What is the value of n in the list above?

(1) $k < n$

(2) The median of the numbers in the list is 10.

If x and y are integers, is $x > y$?

(1) $x + y > 0$

(2) $y^x < 0$

The lifetimes of all the batteries produced by a certain company in a year have a distribution that is symmetric about the mean m . If the distribution has a standard deviation of d , what percent of the distribution is greater than $m + d$?

(1) 68 percent of the distribution lies in the interval from $m - d$ to $m + d$, inclusive.

(2) 16 percent of the distribution is less than $m - d$.

If n is a positive integer and $k = 5.1 * 10^n$, what is the value of k ?

(1) $6,000 < k < 500,000$

(2) $k^2 = 2.601 * 10^9$

The range of the numbers in set S is x , and the range of the numbers in set T is y . If all of the numbers in set T are also in set S, is x greater than y ?

(1) Set S consists of 7 numbers

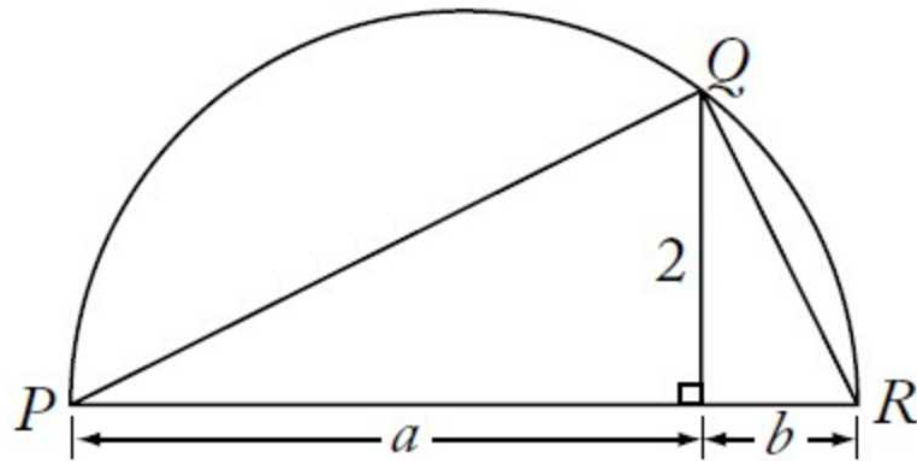
(2) Set T consists of 6 numbers

	Favorable	Unfavorable	Not Sure
Candidate <i>M</i>	40	20	40
Candidate <i>N</i>	30	35	35

The table above shows the results of a survey of 100 voters who each responded "Favorable" or "Unfavorable" or "Not Sure" when asked about their impressions of Candidate M and of Candidate N. What was the number of voters who responded "Favorable" for both candidates?

(1)The number of voters who did not respond "Favorable" for either candidate was 40.

(2)The number of voters who responded "Unfavorable" for both candidates was 10.



If arc PQR above is a semicircle, what is the length of diameter \overline{PR} ?

(1) $a = 4$

(2) $b = 1$

Material A costs \$3 per kilogram, and material B costs \$5 per kilogram. If 10 kilograms of material K consists of x kilograms of material A and y kilograms of material B, is $x > y$?

(1) $y > 4$

(2) The cost of the 10 kilograms of material K is less than \$40.

- A** Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
- B** Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
- C** BOTH statement TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
- D** EACH statement ALONE is sufficient.
- E** Statements (1) and (2) TOGETHER are NOT sufficient.

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What is the number of cans that can be packed in a certain carton?

- (1) The interior volume of this carton is 2,304 cubic inches.
- (2) The exterior of each can is 6 inches high and has a diameter of 4 inches.

If d denotes a decimal, is $d \geq 0.5$?

(1) When d is rounded to the nearest tenth, the result is 0.5.

(2) When d is rounded to the nearest integer, the result is 1.

How many integers are there between, but not including, integers r and s ?

(1) $s - r = 10$

(2) There are 9 integers between, but not including, $r + 1$ and $s + 1$.

Each week a certain salesman is paid a fixed amount equal to \$300, plus a commission equal to 5 percent of the amount of his sales that week over \$1,000. What is the total amount the salesman was paid last week?

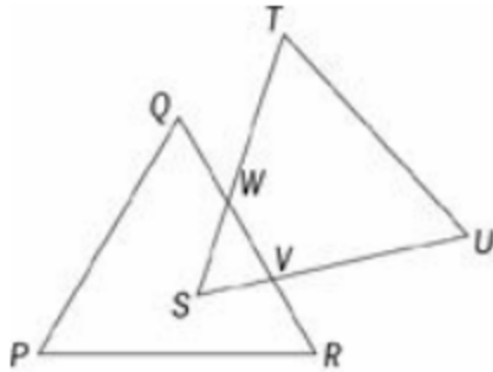
(1) The total amount the salesman was paid last week is equal to 10 percent of the amount of his sales last week.

(2) The salesman's sales last week totaled \$5,000.

In planning for a trip, Joan estimated both the distance of the trip, in miles, and her average speed, in miles per hour. She accurately divided her estimated distance by her estimated average speed to obtain an estimate for the time, in hours, that the trip would take. Was her estimate within 0.5 hour of the actual time that the trip took?

(1) Joan's estimate for the distance was within 5 miles of the actual distance.

(2) Joan's estimate for her average speed was within 10 miles per hour of her actual average speed.



In the figure above, PQR and STU are identical equilateral triangles, and $PQ = 6$. What is the perimeter of polygon $PQWTUVR$?

(1) Triangle SWV has perimeter 9.

(2) VW has length 3.5.