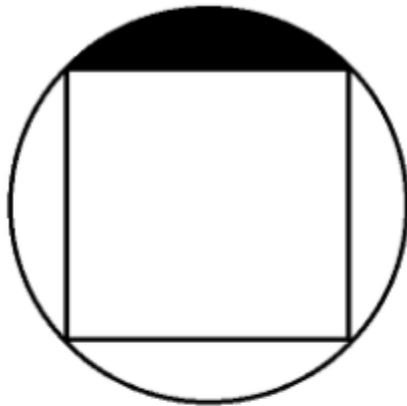


Question 1



The above figure shows a square inscribed inside a circle. What is the area of the black region?

Statement 1: The square has perimeter 40.

Statement 2: The circle has area 50π .

Possible Answers:

BOTH statements TOGETHER are sufficient to answer the question, but NEITHER statement ALONE is sufficient to answer the question.

Statement 2 ALONE is sufficient to answer the question, but Statement 1 ALONE is NOT sufficient to answer the question.

BOTH statements TOGETHER are insufficient to answer the question.

EITHER statement ALONE is sufficient to answer the question.

Statement 1 ALONE is sufficient to answer the question, but Statement 2 ALONE is NOT sufficient to answer the question.

Question 2

Find the area square R

I) The diagonal of square R is $15\sqrt{2}$ yd.

II) The perimeter of square R is 60.

Possible Answers:

Neither statement is sufficient to solve the question. More information is needed.

Statement 2 is sufficient to solve the question, but statement 1 is not sufficient to solve the question.

Each statement alone is enough to solve the question.

Both statements taken together are sufficient to solve the question.

Statement 1 is sufficient to solve the question, but statement 2 is not sufficient to solve the question.

Question 3

True or false: $X > 10$

Statement 1: A square with sidelength X has perimeter greater than 100.

Statement 2: A square with sidelength X has area greater than 40.

Possible Answers:

EITHER STATEMENT ALONE provides sufficient information to answer the question.

STATEMENT 1 ALONE provides sufficient information to answer the question, but STATEMENT 2 ALONE does NOT provide sufficient information to answer the question.

STATEMENT 2 ALONE provides sufficient information to answer the question, but STATEMENT 1 ALONE does NOT provide sufficient information to answer the question.

BOTH STATEMENTS TOGETHER do NOT provide sufficient information to answer the question.

BOTH STATEMENTS TOGETHER provide sufficient information to answer the question, but NEITHER STATEMENT ALONE provides sufficient information to answer the question.

Question 4

Gene is building a fence. He is using square fence posts and needs to know the total distance around one pole. Help him find the distance.

I) The fence will be 3 feet tall and 30 feet long.

II) The diagonal distance from one corner of a fence post to its other corner is $3\sqrt{2}$ inches.

Possible Answers:

Neither statement is sufficient to answer the question. More information is needed.

Statement II is sufficient to answer the question, but statement I is not sufficient to answer the question.

Either statement is sufficient to answer the question.

Statement I is sufficient to answer the question, but statement II is not sufficient to answer the question.

Both statements are needed to answer the question.

Question 5

Find the perimeter of the square.

1. The length of the diagonal of the square is $12\sqrt{2}$.
2. The area of the square is 144.

Possible Answers:

Each statement alone is sufficient to answer the question.

Both statements taken together are sufficient to answer the question, but neither statement alone is sufficient.

Statements 1 and 2 are not sufficient, and additional data is needed to answer the question.

Statement 1 alone is sufficient, but statement 2 alone is not sufficient to answer the question.

Statement 2 alone is sufficient, but statement 1 alone is not sufficient to answer the question.

Question 6

The ratio of square A to square B is 3:1. Find the perimeter of square B.

1. The area of square A is 144cm^2 .
2. The length of the diagonal of square B is $4\sqrt{2}\text{cm}$.

Possible Answers:

Statement 1 alone is sufficient, but statement 2 alone is not sufficient to answer the question.

Each statement alone is sufficient to answer the question.

Statement 2 alone is sufficient, but statement 1 alone is not sufficient to answer the question.

Statements 1 and 2 are not sufficient, and additional data is needed to answer the question.

Both statements taken together are sufficient to answer the question, but neither statement alone is sufficient.

Question 7

What is the perimeter of the square?

1. A side measures 5in .
2. The area of the square is 25in^2 .

Possible Answers:

Both statements taken together are sufficient to answer the question, but neither statement alone is sufficient.

Statement 1 alone is sufficient, but statement 2 alone is not sufficient to answer the question.

Statement 2 alone is sufficient, but statement 1 alone is not sufficient to answer the question.

Statements 1 and 2 are not sufficient, and additional data is needed to answer the question.

Each statement alone is sufficient to answer the question.

Question 8

Find the perimeter of the square.

1. The diagonal measures $6\sqrt{2}$ inches.
2. The diagonal is found by $x\sqrt{2}$ where x represents a square's side length.

Possible Answers:

Statement 1 alone is sufficient, but statement 2 alone is not sufficient to answer the question.

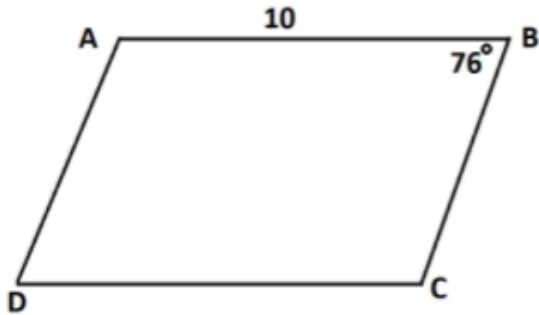
Both statements taken together are sufficient to answer the question, but neither statement alone is sufficient.

Each statement alone is sufficient to answer the question.

Statement 2 alone is sufficient, but statement 1 alone is not sufficient to answer the question.

Statements 1 and 2 are not sufficient, and additional data is needed to answer the question.

Question 9



NOTE: Figure NOT drawn to scale.

Is the above figure a parallelogram?

Statement 1: $CD = 10$

Statement 2: $\overline{AB} \parallel \overline{CD}$

Possible Answers:

Statement 2 ALONE is sufficient to answer the question, but Statement 1 ALONE is NOT sufficient to answer the question.

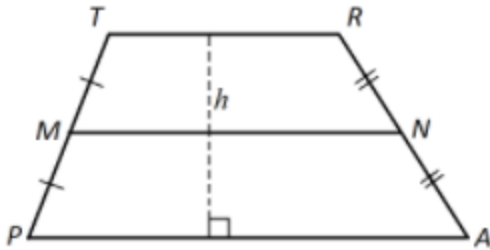
BOTH statements TOGETHER are insufficient to answer the question.

Statement 1 ALONE is sufficient to answer the question, but Statement 2 ALONE is NOT sufficient to answer the question.

BOTH statements TOGETHER are sufficient to answer the question, but NEITHER statement ALONE is sufficient to answer the question.

EITHER statement ALONE is sufficient to answer the question.

Question 10



Notes: h refers to the length of the entire dashed line. Figure not drawn to scale.

Calculate h , the height of the large trapezoid.

Statement 1: $MN = 35$

Statement 2: The area of the trapezoid is 7,000.

Possible Answers:

Statement 1 ALONE is sufficient to answer the question, but Statement 2 ALONE is NOT sufficient to answer the question.

BOTH statements TOGETHER are sufficient to answer the question, but NEITHER statement ALONE is sufficient to answer the question.

Statement 2 ALONE is sufficient to answer the question, but Statement 1 ALONE is NOT sufficient to answer the question.

BOTH statements TOGETHER are insufficient to answer the question.

EITHER statement ALONE is sufficient to answer the question.

Question 11

Consider parallelogram $TGIF$.

I) The perimeter of $TGIF$ is 57 light years.

II) Side TG is 13 light years and is equivalent to side IF .

Find the length of side GI .

Possible Answers:

Both statements are needed to answer the question.

Either statement is sufficient to answer the question.

Statement II is sufficient to answer the question, but statement I is not sufficient to answer the question.

Neither statement is sufficient to answer the question. More information is needed.

Statement I is sufficient to answer the question, but statement II is not sufficient to answer the question.

Question 12

Calculate the side of a square.

Statement 1: A circle with an area of π is enclosed inside the square and touches all four edges of the square.

Statement 2: A circle with a circumference of π encloses the square and touches all four corners of the square.

Possible Answers:

Statement 1) ALONE is sufficient, but Statement 2) ALONE is not sufficient to answer the question.

EACH statement ALONE is sufficient.

BOTH statements TOGETHER are NOT sufficient, and additional data is needed to answer the question.

BOTH statements taken TOGETHER are sufficient to answer the question, but neither statement ALONE is sufficient.

Statement 2) ALONE is sufficient, but Statement 1) ALONE is not sufficient to answer the question.

Question 13

Consider isosceles trapezoid $MNOP$.

I) $MNOP$ has a perimeter of 360 megaparsecs.

II) The larger base of $MNOP$ is 45 times bigger than the smaller base.

Find the length of the two legs of $MNOP$.

Possible Answers:

Both statements are needed to answer the question.

Either statement is sufficient to answer the question.

Statement I is sufficient to answer the question, but Statement II is not sufficient to answer the question.

Neither statement is sufficient to answer the question. More information is needed.

Statement II is sufficient to answer the question, but Statement I is not sufficient to answer the question.

Question 14

What is the perimeter of Rhombus $ABCD$?

Statement 1: $\triangle ABD$ has perimeter 15.

Statement 2: $\triangle ABC$ is equilateral.

Possible Answers:

EITHER statement ALONE is sufficient to answer the question.

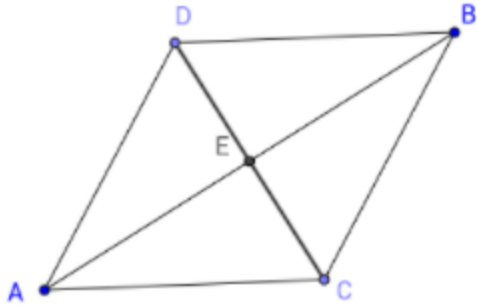
BOTH statements TOGETHER are insufficient to answer the question.

Statement 2 ALONE is sufficient to answer the question, but Statement 1 ALONE is NOT sufficient to answer the question.

BOTH statements TOGETHER are sufficient to answer the question, but NEITHER statement ALONE is sufficient to answer the question.

Statement 1 ALONE is sufficient to answer the question, but Statement 2 ALONE is NOT sufficient to answer the question.

Question 15



What is the perimeter of quadrilateral $ACBD$?

(1) Diagonal \overline{DC} and \overline{AB} are perpendicular with midpoint E .

(2) $\overline{DB} + \overline{BC} = 15$

Possible Answers:

Statement 1 alone is sufficient

Each statement alone is sufficient

Statements 1 and 2 together are not sufficient

Statement 2 alone is sufficient

Both statements together are sufficient

Question 16

Consider rectangle $CONT$.

I) Side CO is three fourths of side ON .

II) Side NT is 15.7 meters long.

What is the perimeter of $CONT$?

Possible Answers:

Both statements are needed to answer the question.

Statement I is sufficient to answer the question, but statement II is not sufficient to answer the question.

Statement II is sufficient to answer the question, but statement I is not sufficient to answer the question.

Neither statement is sufficient to answer the question. More information is needed.

Either statement is sufficient to answer the question.

Question 17

Find the perimeter of the rectangle.

Statement 1: The area of the rectangle is 24.

Statement 2: The diagonal of the rectangle is 5.

Possible Answers:

EACH statement ALONE is sufficient.

BOTH statements TOGETHER are NOT sufficient, and additional data is needed to answer the question.

BOTH statements taken TOGETHER are sufficient to answer the question, but neither statement ALONE is sufficient.

Statement 2) ALONE is sufficient, but Statement 1) ALONE is not sufficient to answer the question.

Statement 1) ALONE is sufficient, but Statement 2) ALONE is not sufficient to answer the question.

Question 18

Is parallelogram $ABCD$ a rectangle?

Statement 1: $\angle A = 90^\circ$

Statement 2: $AC = BD$

Possible Answers:

BOTH statements TOGETHER are sufficient to answer the question, but NEITHER statement ALONE is sufficient to answer the question.

EITHER statement ALONE is sufficient to answer the question.

Statement 1 ALONE is sufficient to answer the question, but Statement 2 ALONE is NOT sufficient to answer the question.

Statement 2 ALONE is sufficient to answer the question, but Statement 1 ALONE is NOT sufficient to answer the question.

BOTH statements TOGETHER are insufficient to answer the question.

Question 19

Given a quadrilateral $QUAD$, can a circle be circumscribed about it?

Statement 1: Quadrilateral $QUAD$ is not a rectangle.

Statement 2: $m\angle Q = 120^\circ, m\angle A = 50^\circ$

Possible Answers:

Statement 1 ALONE is sufficient to answer the question, but Statement 2 ALONE is NOT sufficient to answer the question.

Statement 2 ALONE is sufficient to answer the question, but Statement 1 ALONE is NOT sufficient to answer the question.

EITHER statement ALONE is sufficient to answer the question.

BOTH statements TOGETHER are insufficient to answer the question.

BOTH statements TOGETHER are sufficient to answer the question, but NEITHER statement ALONE is sufficient to answer the question.

Question 20

Are the diagonals of Quadrilateral $QUAD$ perpendicular?

(a) $QU = UA$

(b) $QD = DA$

Possible Answers:

BOTH statements TOGETHER are sufficient to answer the question, but NEITHER statement ALONE is sufficient to answer the question.

Statement 2 ALONE is sufficient to answer the question, but Statement 1 ALONE is NOT sufficient to answer the question.

Statement 1 ALONE is sufficient to answer the question, but Statement 2 ALONE is NOT sufficient to answer the question.

BOTH statements TOGETHER are insufficient to answer the question.

EITHER statement ALONE is sufficient to answer the question.