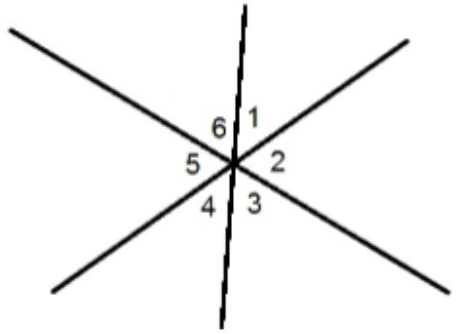
GMAT Geometry Practice Paper 4

## Question 1




Note: Figure NOT drawn to scale.

Refer to the above diagram. What is the measure of $\angle 1$ ?

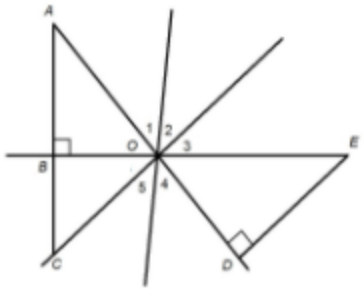
Statement 1: $m\angle 3 + m\angle 6 = 132^\circ$

Statement 2: $m\angle 1 + m\angle 4 = 140^\circ$

Possible Answers:

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

## Question 2




Note: Figure NOT drawn to scale.

Refer to the above figure. Evaluate $m\angle 1 + m\angle 2$.

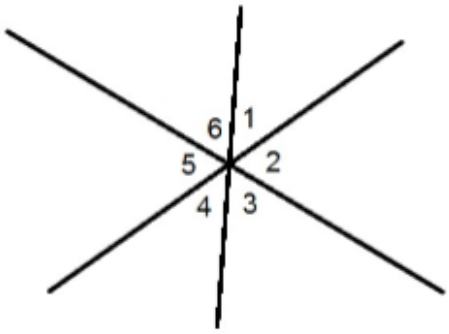
Statement 1: $\angle 4$ and $\angle 5$ are complementary.

Statement 2: $OD \cdot \sqrt{2} = OE$

Possible Answers:

| |
|---|
| 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. |
| 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. |

## Question 3




Note: Figure NOT drawn to scale.

Refer to the above diagram. What is the measure of $\angle 1$ ?

Statement 1: $\angle 6$ is a $54^\circ$ angle.

Statement 2: $\angle 2 \cong \angle 3$

Possible Answers:

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

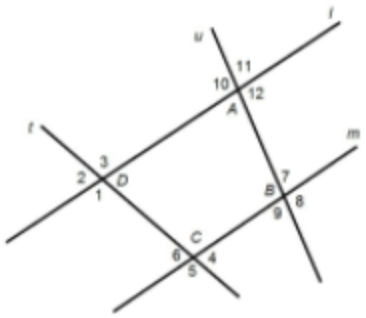
BOTH statements TOGETHER are insufficient to answer the question.

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 4




Note: You may assume that $t$ and $u$ are not parallel lines, but you may *not* assume that $l$ and $m$ are parallel lines unless it is specifically stated.

Refer to the above diagram. Is the sum of the measures of $\angle ADC$ and $\angle DCB$ less than, equal to, or greater than $180^{\circ}$?

Statement 1: There exists a point $Z$ such that $A$ lies on $\overline{ZD}$ and $B$ lies on $\overline{ZC}$.

Statement 2: Quadrilateral $ABCD$ is not a trapezoid.

Possible Answers:

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

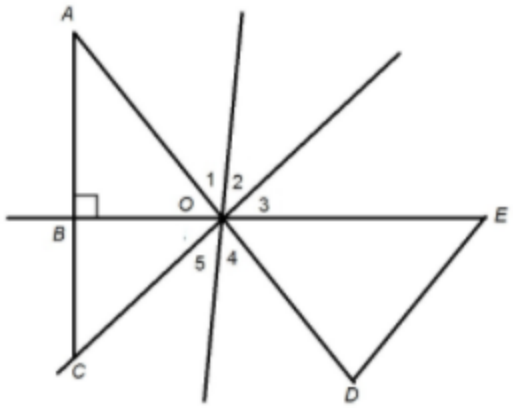
BOTH statements TOGETHER are insufficient to answer the question.

EITHER statement ALONE is 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 5




Note: Figure NOT drawn to scale.

Refer to the above figure. Evaluate $m\angle 3$.

Statement 1: $\overline{BO} \cong \overline{BC}$

Statement 2: $m\angle 5 = 42^\circ$

Possible Answers:

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

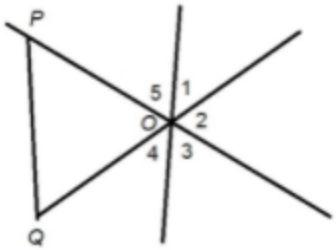
Statement 1 ALONE is sufficient to answer the question, but Statement 2 ALONE is NOT sufficient to answer the question.

EITHER 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.

## Question 6




Note: Figure NOT drawn to scale.

Refer to the above diagram. What is the measure of $\angle 1$ ?

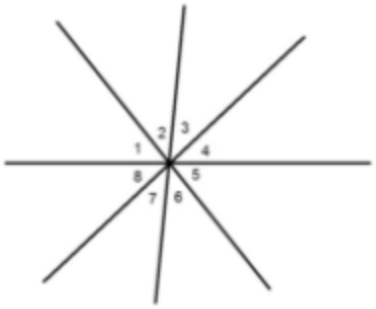
Statement 1: $\triangle OPQ$ is an equilateral triangle.

Statement 2: $m\angle 3 = 65^\circ$

Possible Answers:

| |
|---|
| EITHER 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. |
| 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 7




Note: Figure NOT drawn to scale.

Refer to the above figure. Evaluate $m\angle 1 + m\angle 2$.

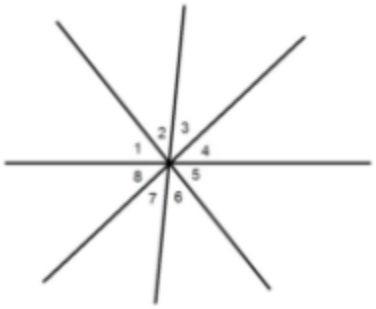
Statement 1: $m\angle 3 + m\angle 4 + m\angle 5 = 131^\circ$

Statement 2: $m\angle 6 + m\angle 7 + m\angle 8 = 131^\circ$

Possible Answers:

| |
|---|
| 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. |
| 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. |

## Question 8




Note: Figure NOT drawn to scale.

Refer to the above figure. Give the measure of $\angle 1$.

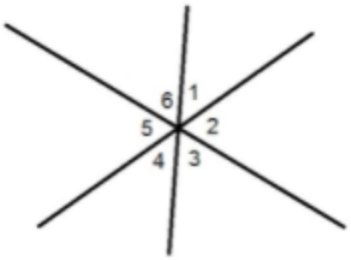
Statement 1: $m\angle 2 + m\angle 3 = 91^\circ$

Statement 2: $m\angle 5 + m\angle 6 = 91^\circ$

Possible Answers:

| |
|---|
| 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. |
| 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. |

## Question 9




Note: Figure NOT drawn to scale.

Refer to the above diagram. Evaluate $m\angle 1 + m\angle 2$.

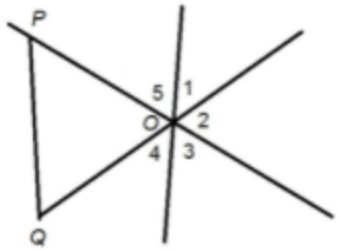
Statement 1: $m\angle 2 + m\angle 3 = 122^0$

Statement 2: $m\angle 3 + m\angle 4 = 126^0$

Possible Answers:

| |
|---|
| 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. |
| 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. |

## Question 10




Note: Figure NOT drawn to scale.

Refer to the above diagram. Evaluate $m\angle 3 + m\angle 4$.

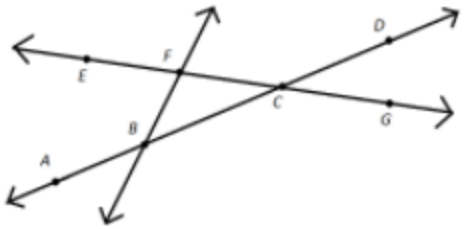
Statement 1: $m\angle 1 + m\angle 5 = 120^{\circ}$

Statement 2: $\triangle OPQ$ is an equilateral triangle.

Possible Answers:

| |
|---|
| 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. |
| 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. |
| EITHER statement ALONE is sufficient to answer the question. |

## Question 11




Refer to the above figure. Jane chose one of the line segments shown in the above diagram but she will not reveal which one. Which one did she choose?

Statement 1: One of the endpoints of the line segment is $B$.

Statement 2: The line segment includes $C$.

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 insufficient to answer the question.

EITHER statement ALONE is 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.

## Question 12

How many times does $f(x)$ and $g(f)$ intersect?

I) $g(f)$ is a linear equation with a slope of $5$.

II) $f(x)$ is quadratic equation with a vertex at $(-76, 79)$.

Possible Answers:

Either statement is 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.

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.

## Question 13

Find the 4 angles created by the two intersecting lines.

Statement 1: $y = 0$ and $x = 0$

Statement 2: $y = 2x + 10$ and $y = -\frac{1}{2}x + 4$

Possible Answers:

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.

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

EACH statement ALONE is sufficient.

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

## Question 14

Determine the value of the four angles created by the intersecting lines.

Statement 1: Two angles are acute, and two angles are obtuse.

Statement 2: Any two non-perpendicular intersecting lines with known equations.

Possible Answers:

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

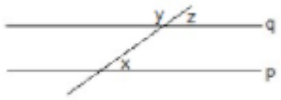
Statement 1) ALONE is sufficient, but Statement 2) ALONE is not sufficient to answer the question.

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

EACH statement ALONE is sufficient.

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

## Question 15




What is the value of x?

(1) $y = 25$

(2) Lines p and q are parallel

Possible Answers:

EACH statement ALONE is sufficient to answer the question asked.

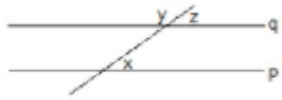
Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed.

BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.

Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.

Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.

## Question 16




What is the value of x?

(1) $\angle z = 30$

(2) $\angle y = 150$

Possible Answers:

BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.

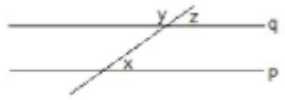
Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed.

Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.

EACH statement ALONE is sufficient to answer the question asked.

Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.

## Question 17




What is the value of x?

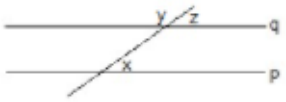
(1) $\angle z = 30$

(2) $\angle y = 150$

Possible Answers:

| |
|---|
| BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked. |
| Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed. |
| Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked. |
| EACH statement ALONE is sufficient to answer the question asked. |
| Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked. |

## Question 18




**Lines p and q are parallel. What's the value of x?**

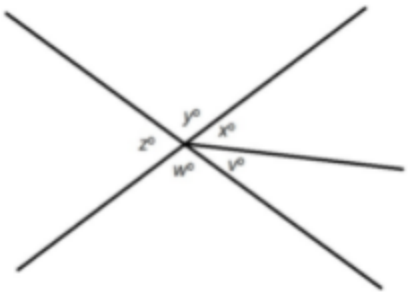
**(1)** $y + z = 180$

**(2)** $y = 110$

Possible Answers:

| |
|---|
| BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked. |
| Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed. |
| EACH statement ALONE is sufficient to answer the question asked. |
| Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked. |
| Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked. |

## Question 19




Note: Figure NOT drawn to scale.

Refer to the above diagram. Evaluate $w$.

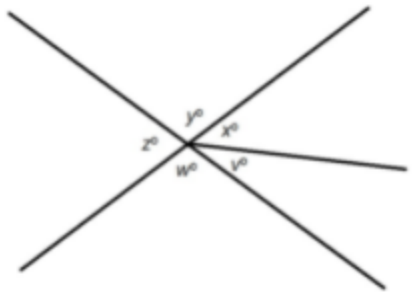
Statement 1: $x = 2v$

Statement 2: $y = 2x$

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 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. |

## Question 20




Note: Figure NOT drawn to scale.

Refer to the above diagram. Evaluate $v$.

Statement 1: $x + y = 150$

Statement 2: $w + v = 130$

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.

EITHER statement ALONE is sufficient to answer the question.

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