



# ***New York State Testing Program***

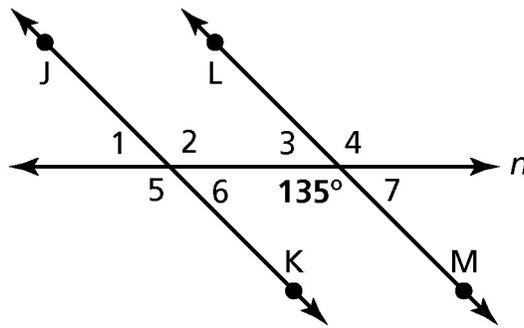
## **Mathematics Test**

Grade **8**

**2009 Scoring Guide Part 1**

29

In the diagram below,  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel, and line  $n$  is a transversal.



[not drawn to scale]

What is the measure of  $\angle 1$ ?

**Answer** \_\_\_\_\_ degrees

On the lines below, explain how you determined your answer.

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**QUESTION 29**

**STRAND 3: GEOMETRY**

*Complete and Correct Response:*

- 45 (degrees)

**AND**

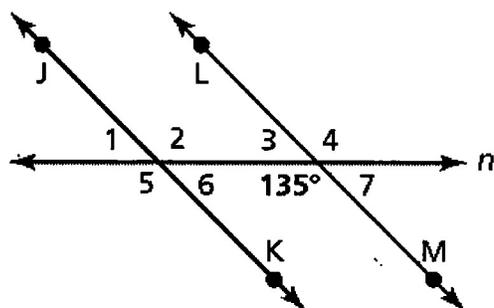
- $\angle 1$  is congruent to  $\angle 3$  because they are corresponding angles.  $\angle 3$  is supplementary to the 135 degree angle, so  $\angle 3 = 180 - 135 = 45$  degrees. Since  $\angle 1$  is congruent to  $\angle 3$ , the measure of  $\angle 1$  is 45 degrees.

OR other valid response

*Score Points:*

Apply 2-point holistic rubric.

29 In the diagram below,  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel, and line  $n$  is a transversal.



[not drawn to scale]

What is the measure of  $\angle 1$ ?

Answer 45 degrees

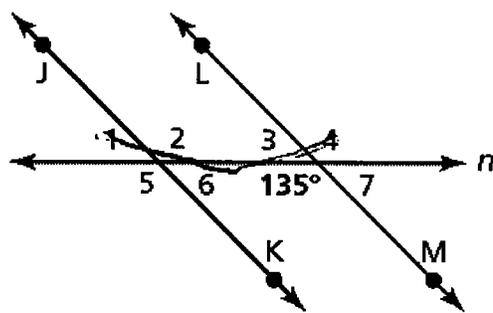
On the lines below, explain how you determined your answer.

$\angle 7$  is supplementary with to  $135^\circ$ .  
 $\angle 7$  and  $\angle 1$  are alternate exterior  
angles meaning they have the same angle.

This response is complete and correct.

Score Point 2

29 In the diagram below,  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel, and line  $n$  is a transversal.



[not drawn to scale]

$$\begin{array}{r} 180^\circ \\ - 135^\circ \\ \hline 45^\circ = \angle 6 \end{array}$$

$$\begin{array}{r} \cancel{4}6 = \cancel{4}1 \\ 45^\circ = 45^\circ \end{array}$$

What is the measure of  $\angle 1$ ?

Answer 45° degrees

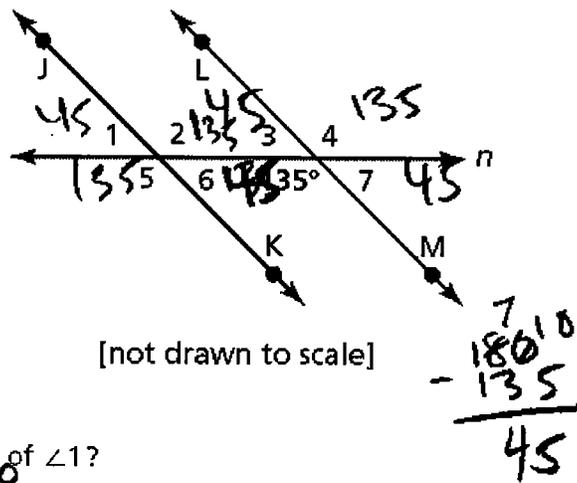
On the lines below, explain how you determined your answer.

$\angle 1 = 45^\circ$ . I determined my answer by simply subtracting  $135^\circ$  from  $180^\circ$  because  $135^\circ$  is on a straight line.  $180^\circ - 135^\circ = 45^\circ$  and that gave me the measure of  $\angle 6$ .  $\angle 6 = \angle 1$  so  $\angle 1 = 45^\circ$  correct.

This response is complete and correct. The correct measure for angle 1 is provided, and the explanation demonstrates a thorough understanding of supplementary angles.

Score Point 2

29 In the diagram below,  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel, and line  $n$  is a transversal.



What is the measure of  $\angle 1$ ?

Answer 45° degrees

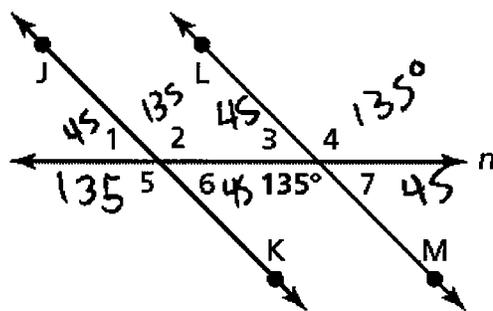
On the lines below, explain how you determined your answer.

I determined my answer  
 by doing  $135^\circ$  is congruent to  
 5.

This response is only partially correct. The correct measure for angle 1 is provided; however, the explanation does not sufficiently explain the supplementary relationship between the angles.

Score Point 1

- 29 In the diagram below,  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel, and line  $n$  is a transversal.



[not drawn to scale]

What is the measure of  $\angle 1$ ?

Answer 45° degrees

On the lines below, explain how you determined your answer.

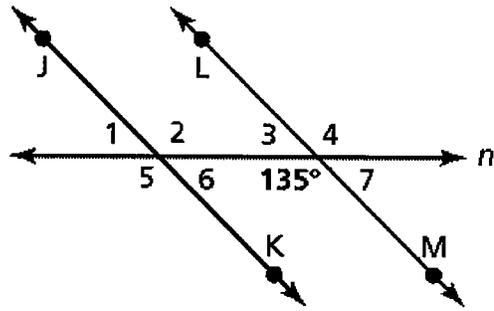
I got my answer because I subtracted  $135 - 180$  to get the amount for the other side which is  $45^\circ$  and since I know that angles 1 and 3 are corresponding angles they are suppose to be equal that is how I got my answer.

This response is only partially correct. A correct measure for angle 1 and sound procedure are provided; however, the explanation contains an incorrect mathematical statement.

Score Point 1

29

In the diagram below,  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel, and line  $n$  is a transversal.



[not drawn to scale]

What is the measure of  $\angle 1$ ?

Answer 45 degrees

On the lines below, explain how you determined your answer.

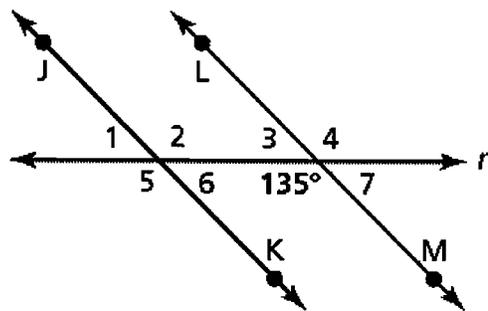
For angle 1, its a  $90^\circ$  angle. I  
subtract 135 and 90 and I got  
45 degrees

This response is incorrect. The correct answer is arrived at using an obviously incorrect procedure.

Score Point 0

29

In the diagram below,  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel, and line  $n$  is a transversal.



[not drawn to scale]

What is the measure of  $\angle 1$ ?

Transversals  
 all odds = 110  
 all evens = 135

Answer 135 degrees

On the lines below, explain how you determined your answer.

In transversals numbered like this one, all odds are equal and all evens are equal (7 would be an 8, because 135 takes it's place). 135 would be a 7, which is odd, like number 1, meaning that they are equal.

This response is incorrect.

Score Point 0



# ***New York State Testing Program***

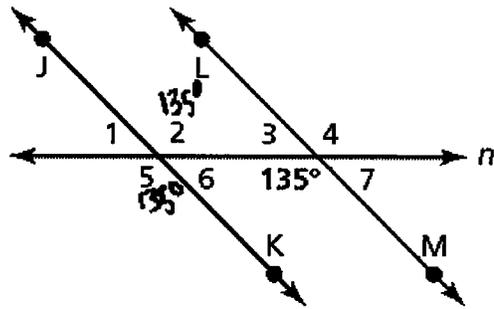
## **Mathematics Test**

Grade **8**

**2009 Practice Test**

29

In the diagram below,  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel, and line  $n$  is a transversal.



[not drawn to scale]

What is the measure of  $\angle 1$ ?

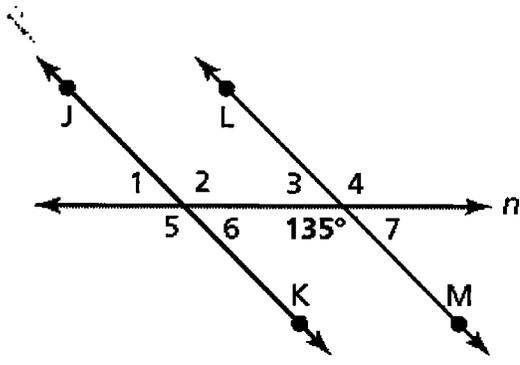
Answer 45 degrees

On the lines below, explain how you determined your answer.

First I saw that the measure of  $\angle 5$  is  $135^\circ$ .  $\angle 5$  and  $\angle 1$  are supplementary which means their sum is  $180^\circ$ . To find 1 I subtracted  $135^\circ$  from  $180^\circ$  and got  $45^\circ$ .

29

In the diagram below,  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel, and line  $n$  is a transversal.



[not drawn to scale]

What is the measure of  $\angle 1$ ?

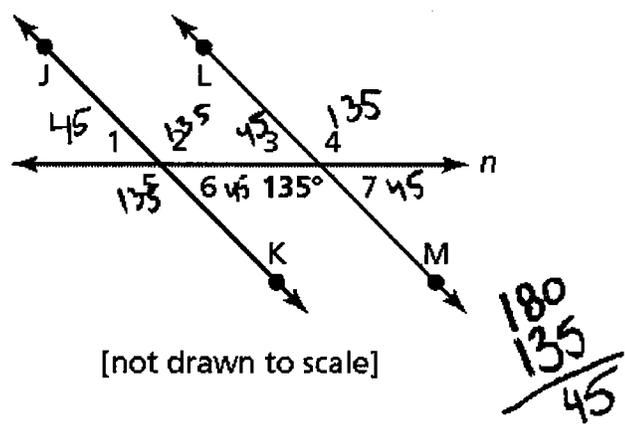
Answer ~~50~~ (45) degrees

On the lines below, explain how you determined your answer.

I determined my answer by taking a protractor and line it up on  
the line and measure it by on the open circle.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

29

In the diagram below,  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel, and line  $n$  is a transversal.



What is the measure of  $\angle 1$ ?

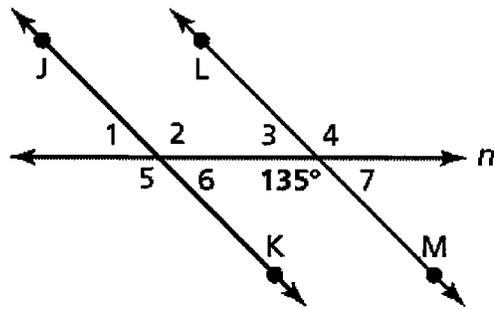
Answer 45 degrees

On the lines below, explain how you determined your answer.

Since  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel lines that mean there is a straight line which is  $180^\circ$  so if one of the angles is  $135$  you would have to subtract  $135$  from  $180$ .

29

In the diagram below,  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel, and line  $n$  is a transversal.



[not drawn to scale]

What is the measure of  $\angle 1$ ?

Answer 40° degrees

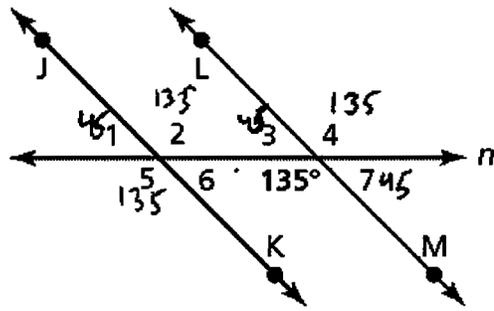
$$\begin{array}{r} 180 \\ - 135 \\ \hline 40 \end{array}$$

On the lines below, explain how you determined your answer.

What I did was subtract 180° from  
135° and got 40°. I did this because  
since angle 1 is the same as angle 7  
I figured that if I solve for angle  
7 it would also be angle 1.

29

In the diagram below,  $\overleftrightarrow{JK}$  and  $\overleftrightarrow{LM}$  are parallel, and line  $n$  is a transversal.



[not drawn to scale]

What is the measure of  $\angle 1$ ?

$$\begin{array}{r} 180 \\ - 135 \\ \hline 45 \end{array}$$

Answer 45° degrees

On the lines below, explain how you determined your answer.

First I figured out what angle 2 was and then I filled out the  
rest of the chart, and  $\angle 1$  became  $45^\circ$ .

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# 8<sup>th</sup> GRADE MATHEMATICS

Name: \_\_\_\_\_

## PRACTICE SET ANSWER KEY

PS 1	(0-2)	1
PS 2	(0-2)	1
PS 3	(0-2)	0
PS 4	(0-2)	1
PS 5	(0-2)	2
PS 6	(0-2)	2
PS 7	(0-2)	0
PS 8	(0-2)	2
PS 9	(0-2)	1
PS 10	(0-2)	2
PS 11	(0-2)	2
PS 12	(0-2)	0
PS 13	(0-2)	1
PS 14	(0-2)	1
PS 15	(0-2)	2
PS 16	(0-2)	2
PS 17	(0-2)	1
PS 18	(0-2)	0
PS 19	(0-2)	2
PS 20	(0-2)	1
PS 21	(0-3)	2
PS 22	(0-3)	3
PS 23	(0-3)	0
PS 24	(0-3)	1
PS 25	(0-3)	2

PS 26	(0-3)	3
PS 27	(0-3)	1
PS 28	(0-3)	0
PS 29	(0-3)	1
PS 30	(0-3)	2
PS 31	(0-2)	1
PS 32	(0-2)	0
PS 33	(0-2)	2
PS 34	(0-2)	2
PS 35	(0-2)	1
PS 36	(0-2)	1
PS 37	(0-2)	2
PS 38	(0-2)	1
PS 39	(0-2)	1
PS 40	(0-2)	2
PS 41	(0-2)	1
PS 42	(0-2)	0
PS 43	(0-2)	2
PS 44	(0-2)	2
PS 45	(0-2)	1
PS 46	(0-2)	0
PS 47	(0-2)	2
PS 48	(0-2)	1
PS 49	(0-2)	2
PS 50	(0-2)	1

