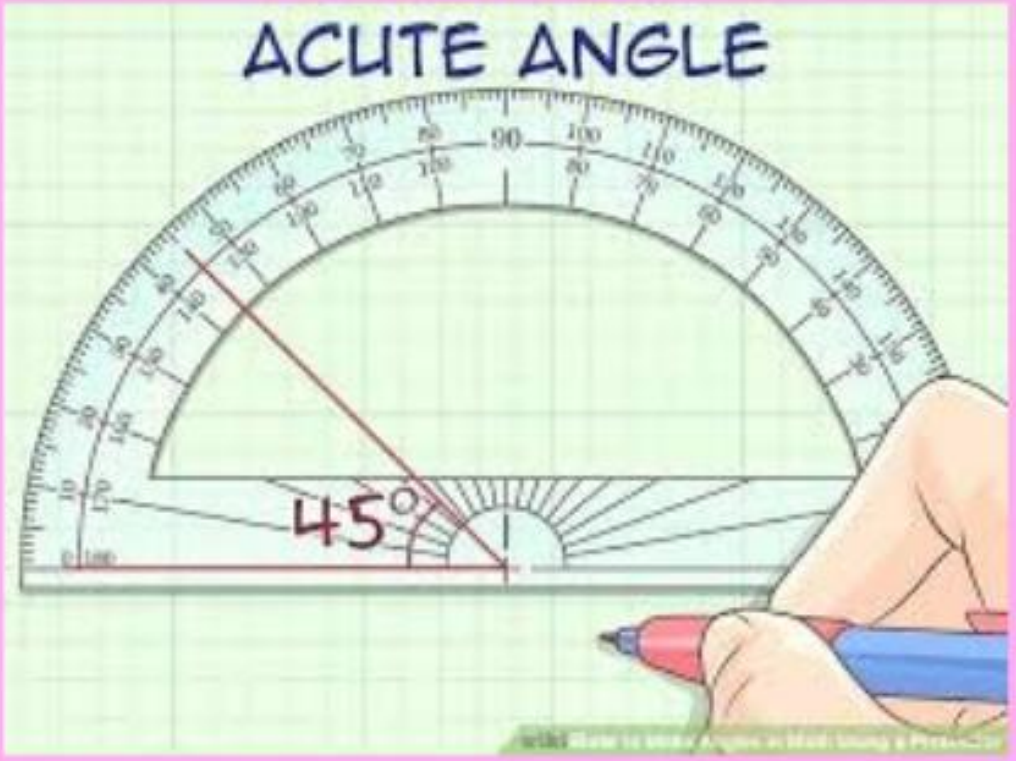
09.02.21

L.O. I can identify angles on a straight line.



Find the factors for these numbers (remember to work systematically)

35

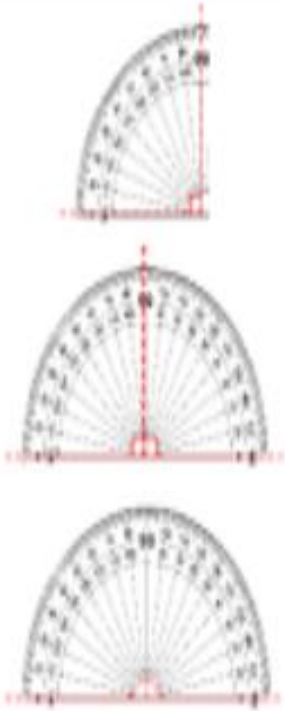
28

106

99

56

Thinking back to yesterday, can we solve these?



There are _____degrees in a right angle.

There are _____right angles on a straight line.

There are _____degrees on a straight line.

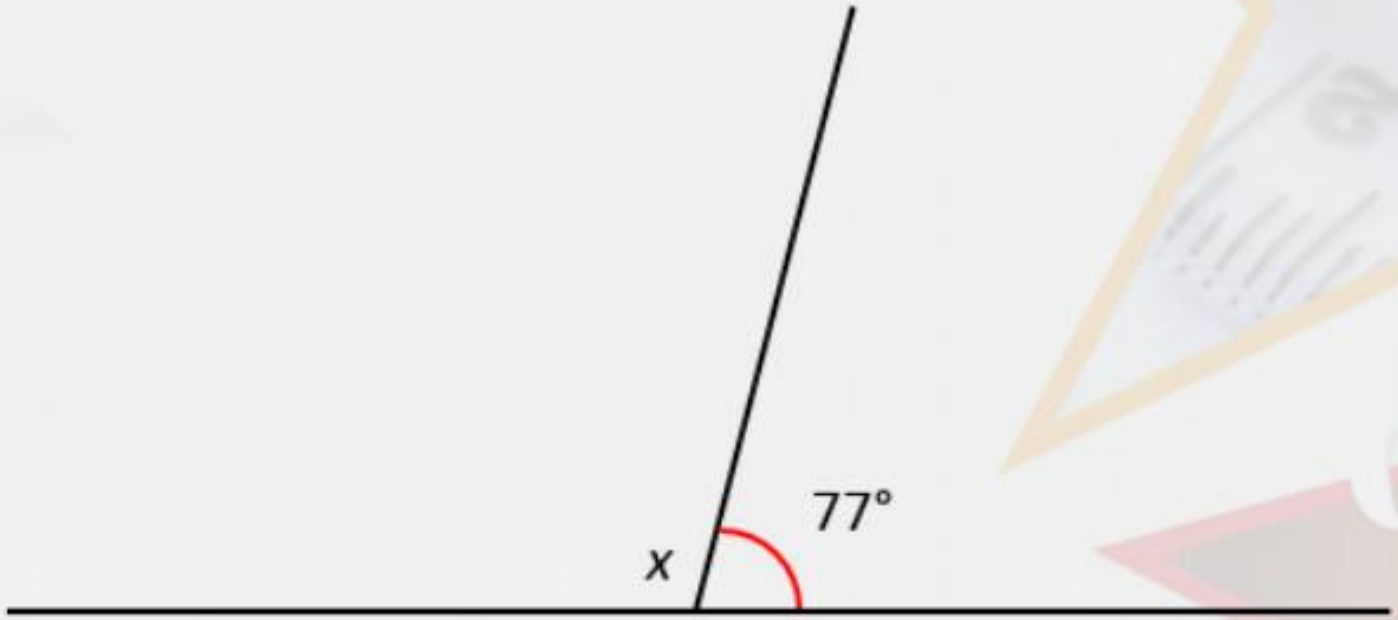
Complete the number sentences.

$91° + \_\_\_\_\_ = 180°$

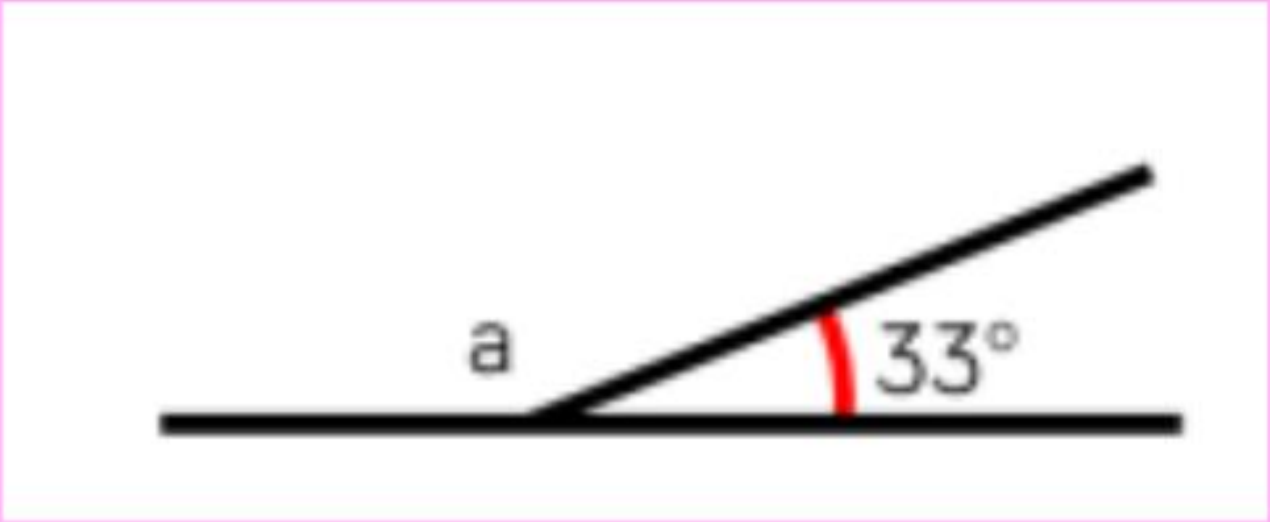
$180° - \_\_\_\_\_ = 91°$

Why is this important to help us find the value of missing angles?

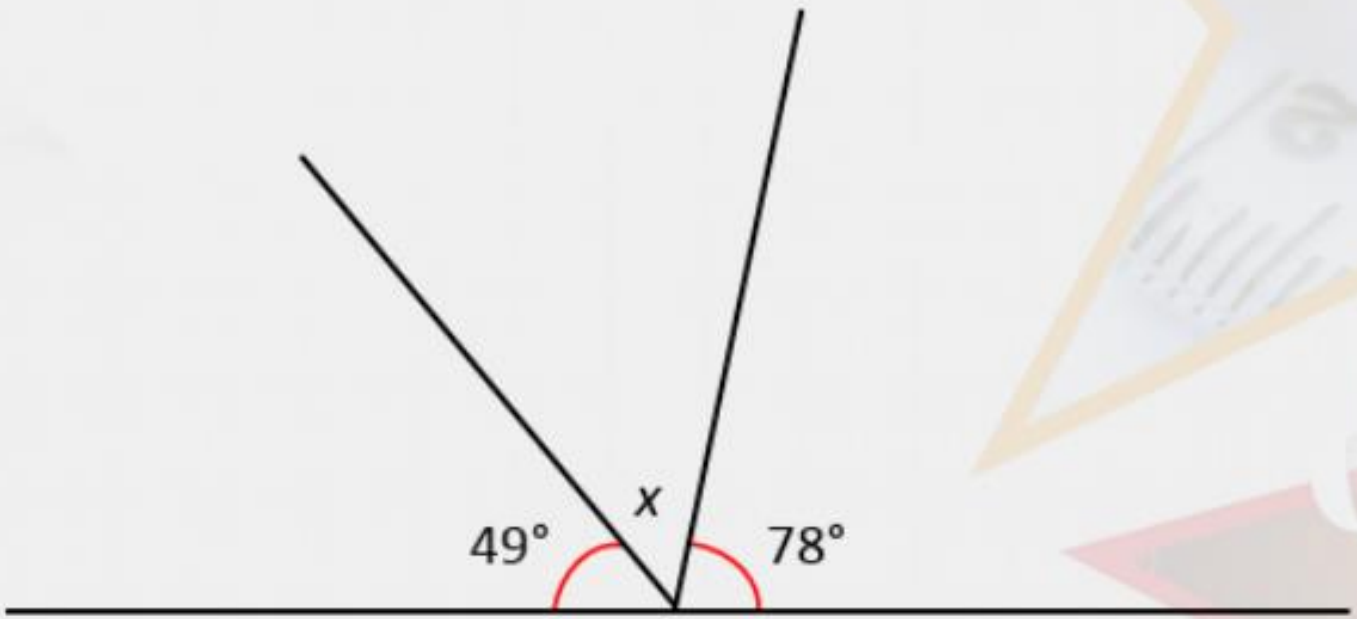
Calculate the missing angle.



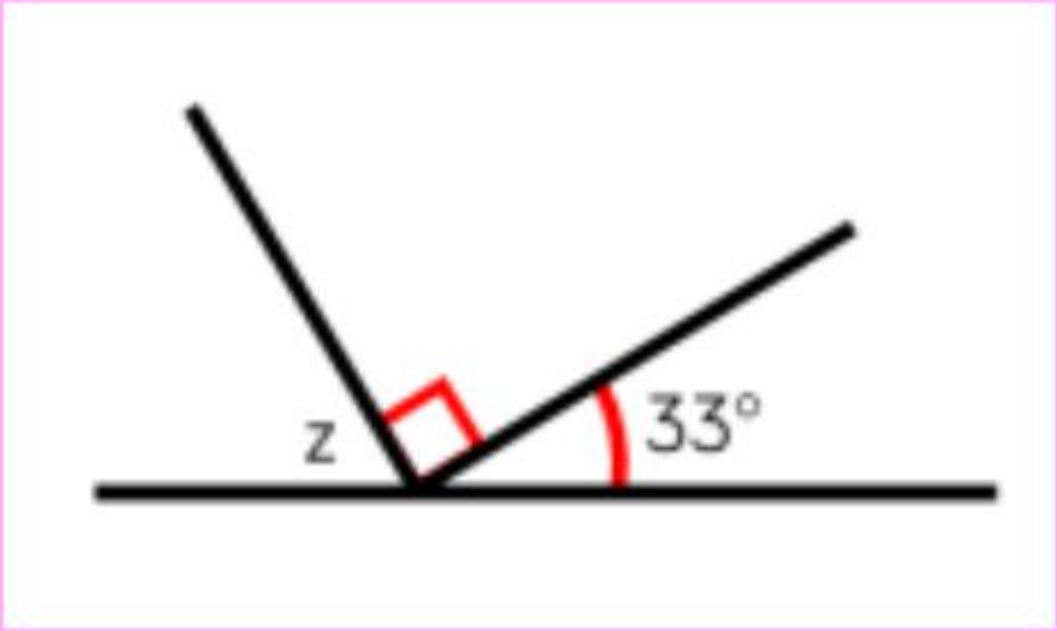
How about this one?



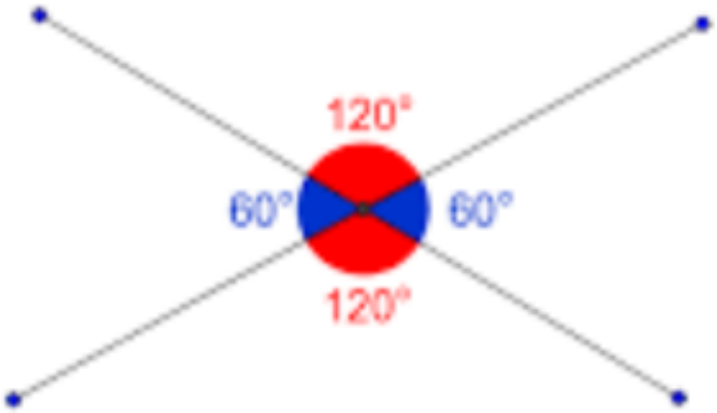
Calculate the missing angle.



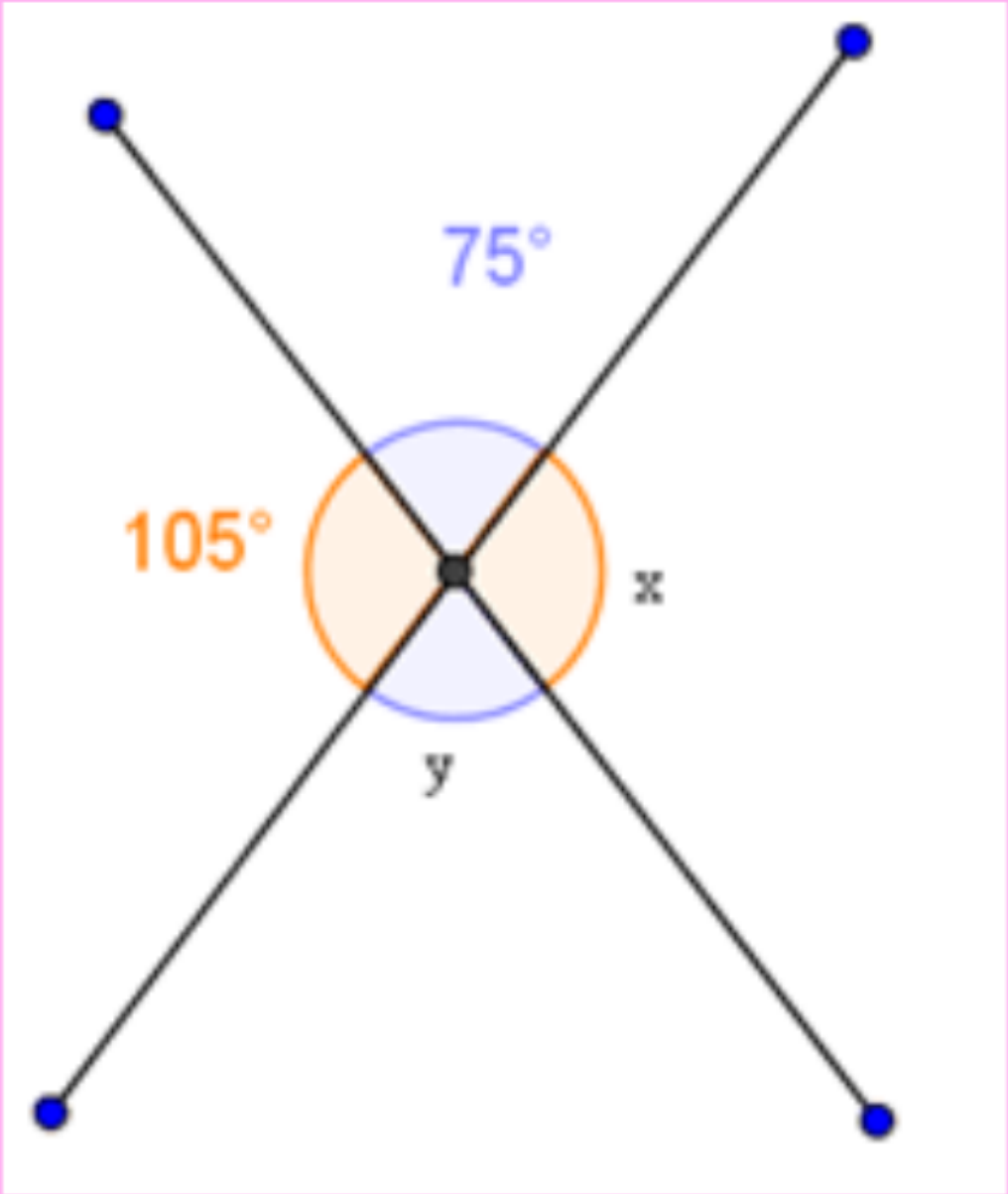
What prior knowledge do we have, that could help us solve this?



What do you notice about this?



Opposite angles are equal.



Using that fact, how do we find the values of x and y?

Your task today is to find the missing values.

Read the questions carefully - there are some that need you to think about differently!

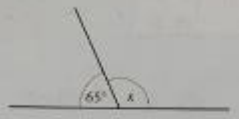
Make sure you show your working out.

TARGET To find the missing angles at a point and on a straight line.

Examples

ANGLES ON A STRAIGHT LINE

The sum of the angles at a point on a straight line is 180°.



$x = 180° - 65°$
$= 115°$

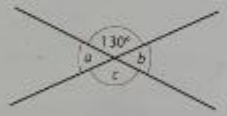
ANGLES AT A POINT

A whole turn is 360°.

$y = 360° - 130°$
$= 230°$

OPPOSITE ANGLES

When two straight lines intersect at a point opposite angles are equal.



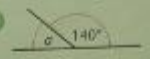
$a = 180° - 130°$
$= 50°$

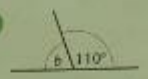
$b = 180° - 130°$
$= 50°$

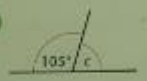
$c = 360° - 130° - 50° - 50°$
$= 360° - 230°$
$= 130°$

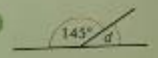
A

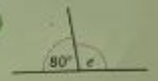
Find the missing angles.

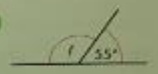
1. 

2. 

3. 

4. 

5. 

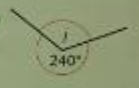
6. 

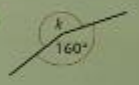
Find the missing angles.

7. 

8. 

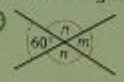
9. 

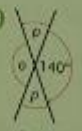
10. 

11. 

12. 

Find the missing angles.

13. 

14. 

15. 

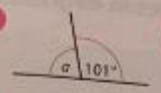
16. 

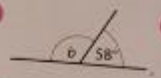
17. 

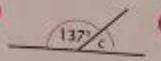
18. 

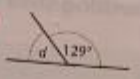
B

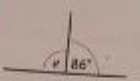
Find the missing angles marked with the letters.

1. 

2. 

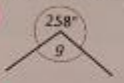
3. 

4. 

5. 

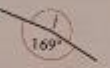
6. 

Find the missing angles.

7. 

8. 

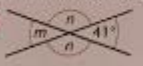
9. 

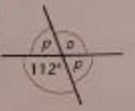
10. 

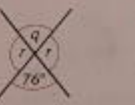
11. 

12. 

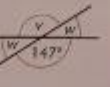
Find the missing angles.

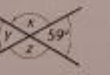
13. 

14. 

15. 

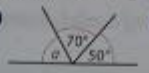
16. 

17. 

18. 

C

Calculate the missing angles.

1. 

2.

3.

4.

5.

6.

Calculate the missing angles.

7.

8.

9.

10.

11.

12.

Calculate the missing angles.

13.

14.

15.

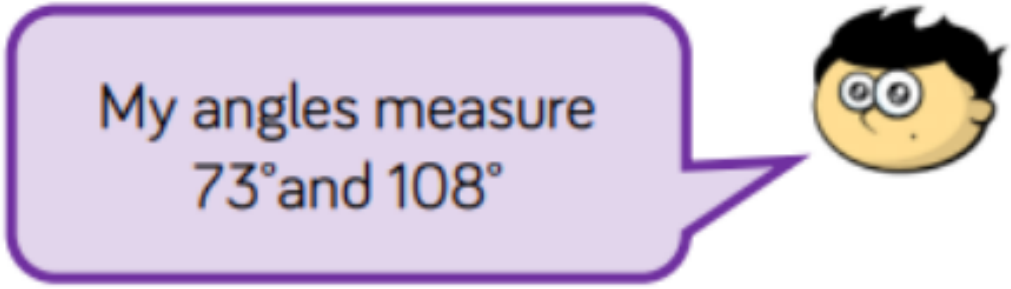
16.

17.

18.

Class challenge!

Jack is measuring two angles on a straight line.



Explain why at least one of Jack's angles must be wrong.