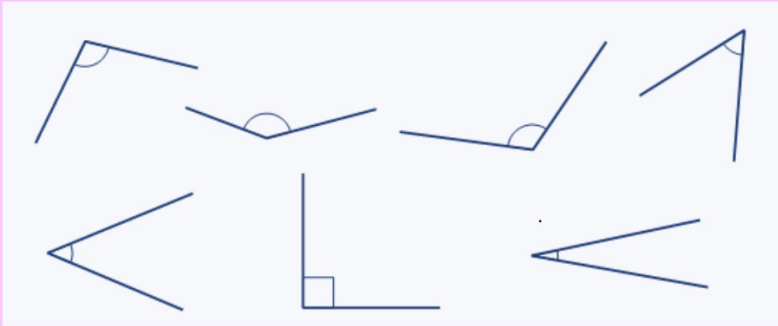
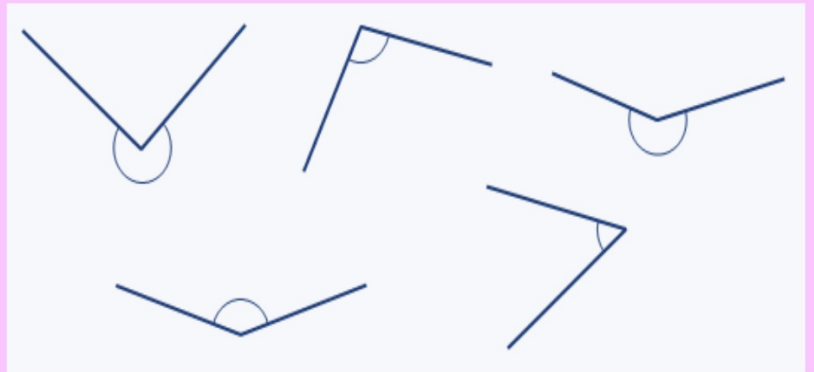


Warm-up

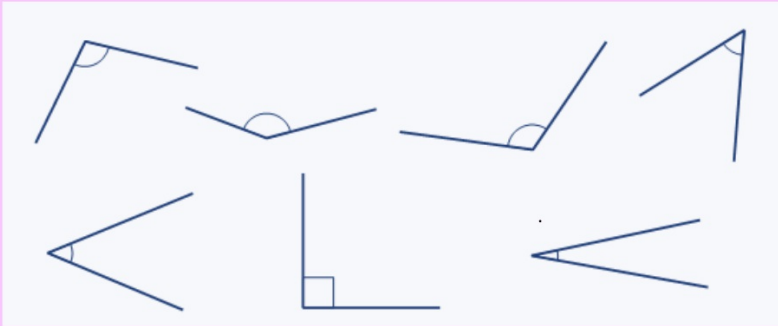


How many acute angles are there?
How many obtuse angles are there?

How many reflex angles are there?



Warm-up

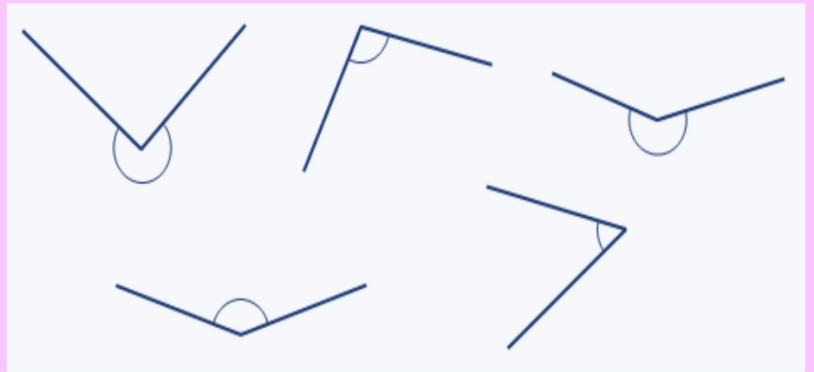


How many acute angles are there? 3

How many obtuse angles are there? 3

How many reflex angles are there?

2



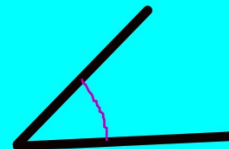
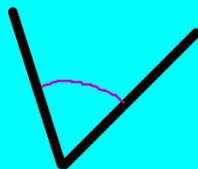
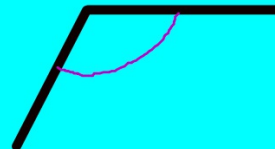
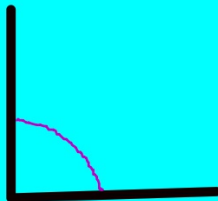
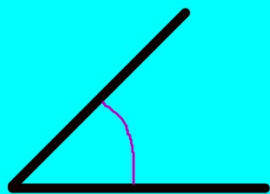
What is an angle?



How are angles measured?

What types of angles do you know?

Can I estimate the size of angles?



Can I estimate the size of angles?

Angle size attempted: 45°

Actual:

Angle size attempted: 110°

Actual:

Can I estimate the size of angles?

1) Copy the following down first before attempting your angle.

Angle size attempted:

Actual:

2) Attempt to draw the angle with just a ruler.

3) Measure your angle with a protractor and give yourself a score:

within 10° = 5 points

within 5° = 10 points

within 2° = 20 points

4) If you are more than 10° out.

1) 55°

5) 105°

9) 200°

2) 85°

6) 18°

10) 304°

3) 135°

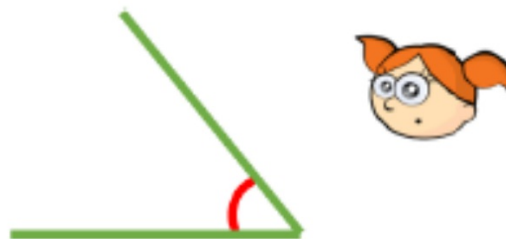
7) 72°

4) 25°

8) 149°

Can I estimate the size of angles?

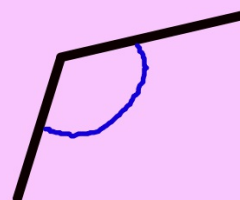
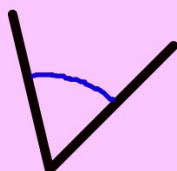
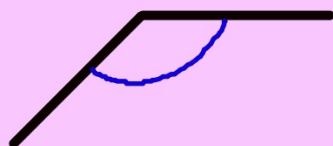
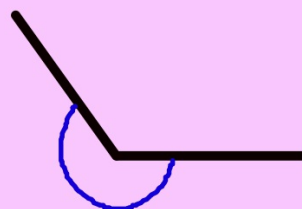
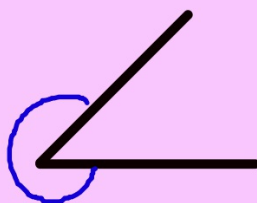
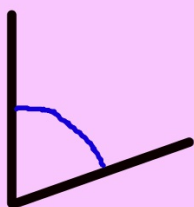
Alex measures this angle:



She says it is 130°

Explain what she has done wrong.

Warm-up



<http://nrich.maths.org/1235>

Can I draw angles with a protractor?

How do you draw angles with a protractor?

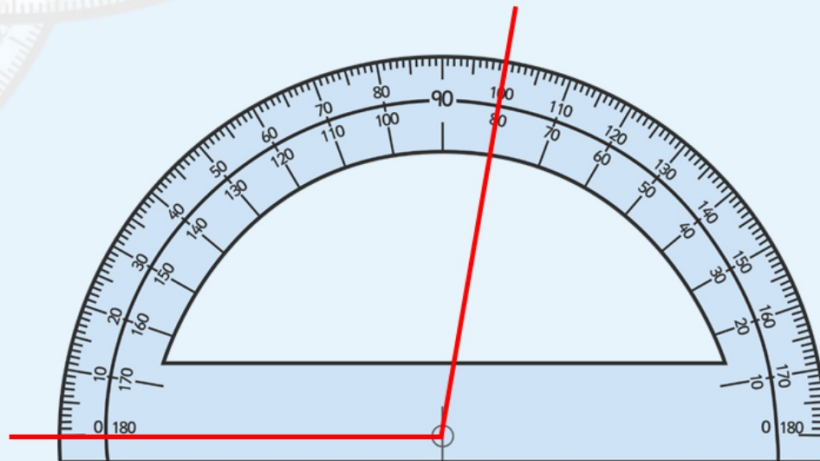
What can you tell me about a protractor?

What do you need to watch out for?

Can I draw angles with a protractor?

1

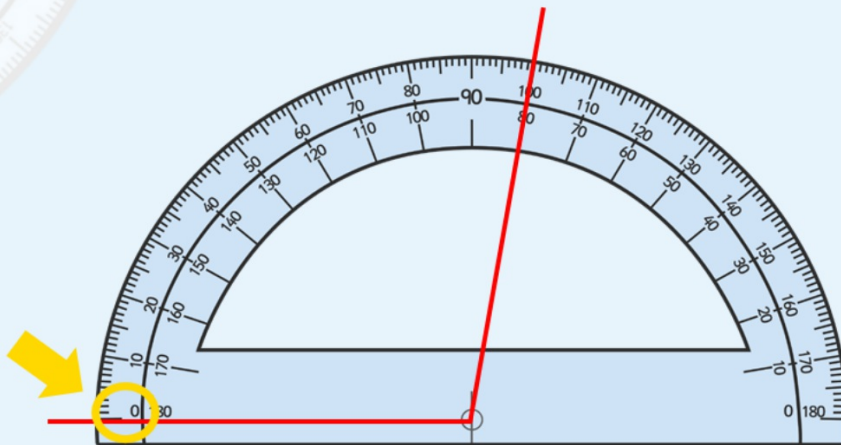
Place the cross or circle at the point (vertex) of the angle that you are measuring.



Can I draw angles with a protractor?

2

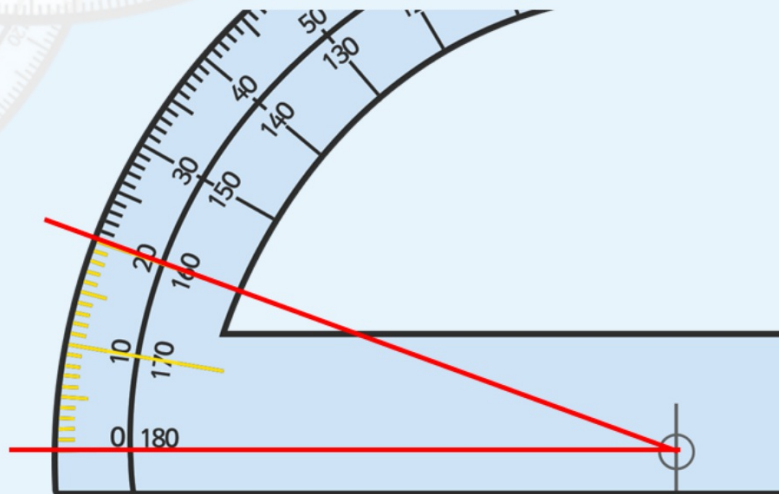
Read from the zero on the outer scale of your protractor.



Can I draw angles with a protractor?

3

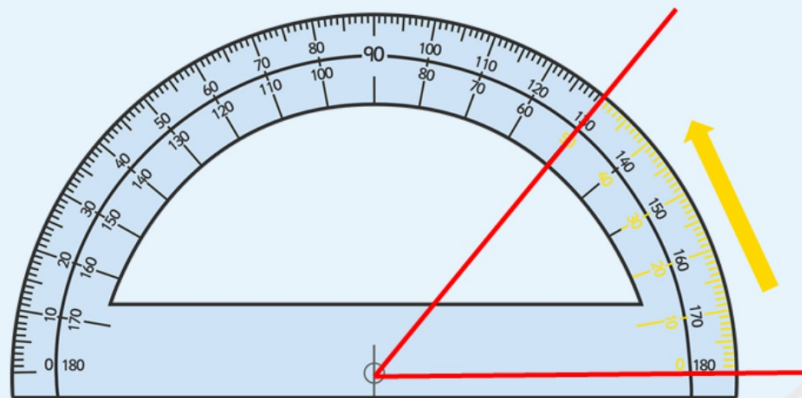
Count the degree lines carefully.



Can I draw angles with a protractor?

4

If the angle that you are measuring turns in an anti-clockwise direction, you will need to use the inner scale of your protractor.



Can I draw angles with a protractor?

Tip!

It is a good idea to estimate the angle before measuring.



Can I draw angles with a protractor?

Angle size: 45°

Angle size: 110°

Can I draw angles with a protractor?

Remember to label the angles you draw.

1) 40°

6) 37°

9) 200°

2) 75°

7) 86°

10) 310°

3) 130°

8) 123°

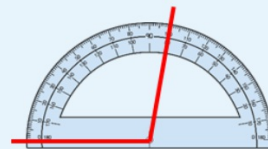
4) 150°

5) 15°

Can I draw angles with a protractor?

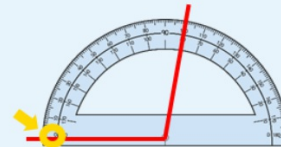
1

Place the cross or circle at the point (vertex) of the angle that you are measuring.



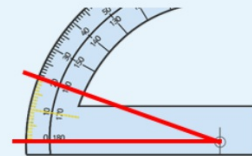
2

Read from the zero on the outer scale of your protractor.



3

Count the degree lines carefully.



4

Use the inner scale of your protractor if the angle turns in an anti-clockwise direction..

