Planner

Angles

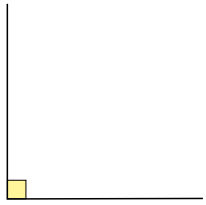
- Describing different types of angles
- Estimating angles
- Measuring and drawing angles
- Calculating angles on a straight line, round a point and in a triangle

Keywords

explanation 1

1 How many degrees are there in each angle?

a



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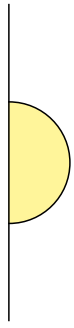

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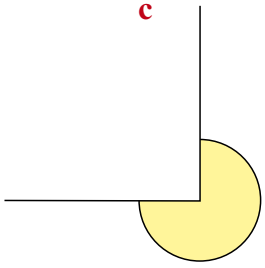

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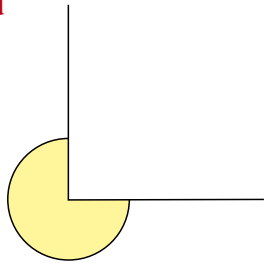
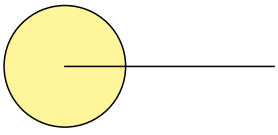


e

f



g Copy and complete these sentences.

i In one full turn there are ☐ degrees.

ii In one half of a full turn there are ☐ degrees.

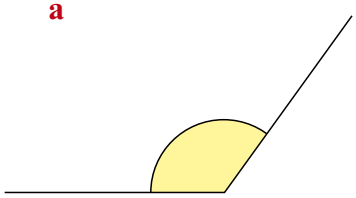
iii In one quarter of a full turn there are ☐ degrees.

iv In three quarters of a full turn there are ☐ degrees.

explanation 2 online

2 Match each angle to its angle type.

a



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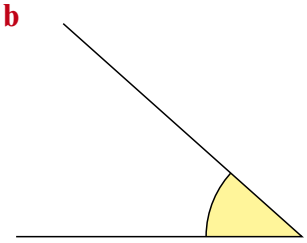
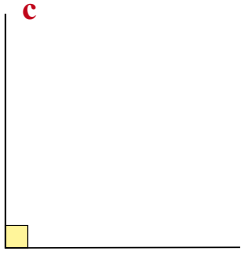


right angle

obtuse angle

acute angle

c



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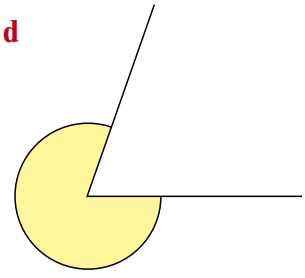
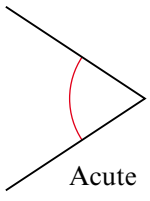


reflex angle

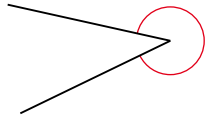
3 Describe each angle. The first one has been done for you.

a



Acute

b



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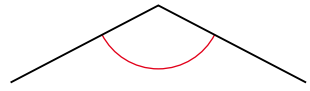

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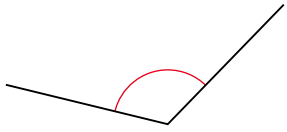

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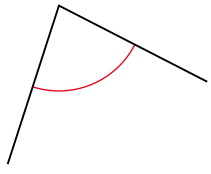

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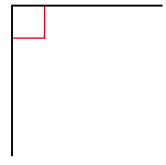
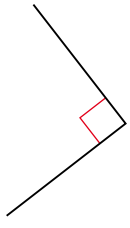


g



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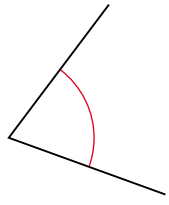
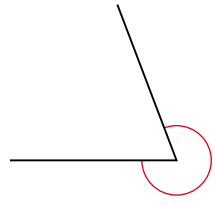
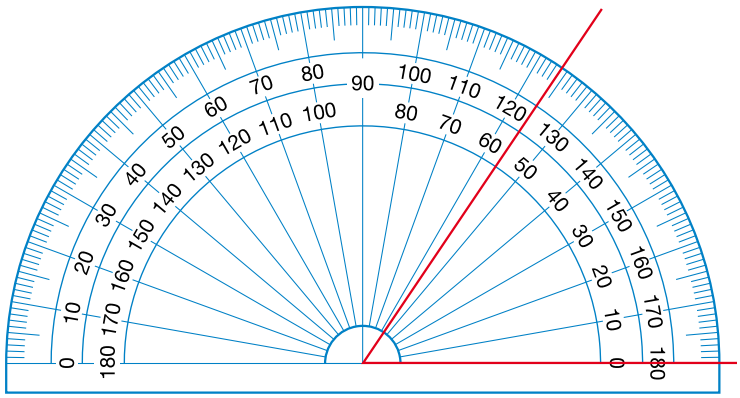


i



explanation 3a | explanation 3b | online

4 Leila is measuring an angle between two lines with a 180° protractor.
The diagram shows the angle she is trying to measure.



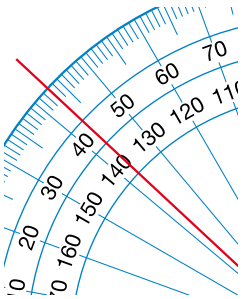
Leila isn't sure whether the angle is 124°, 136°, 64° or 56°.

a Which is the correct reading?

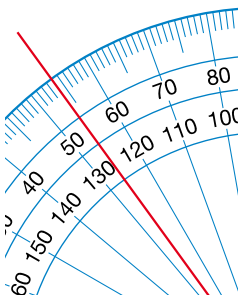
b How do you know the others are wrong?

5 Find the *acute* angles shown on these protractor scales.

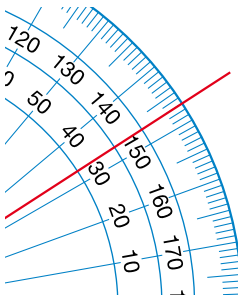
a



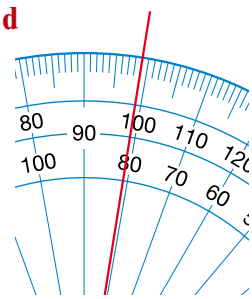
b



c

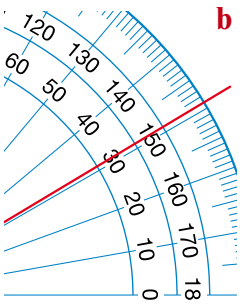


d



6 Find the *obtuse* angles shown on these protractor scales.

a



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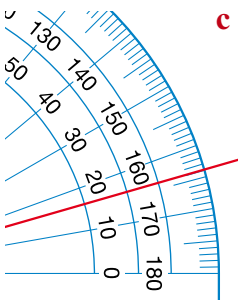
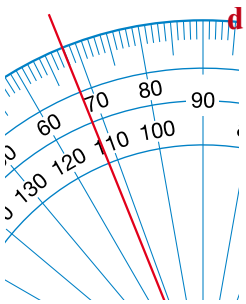
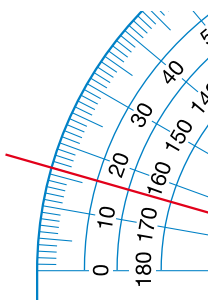


c

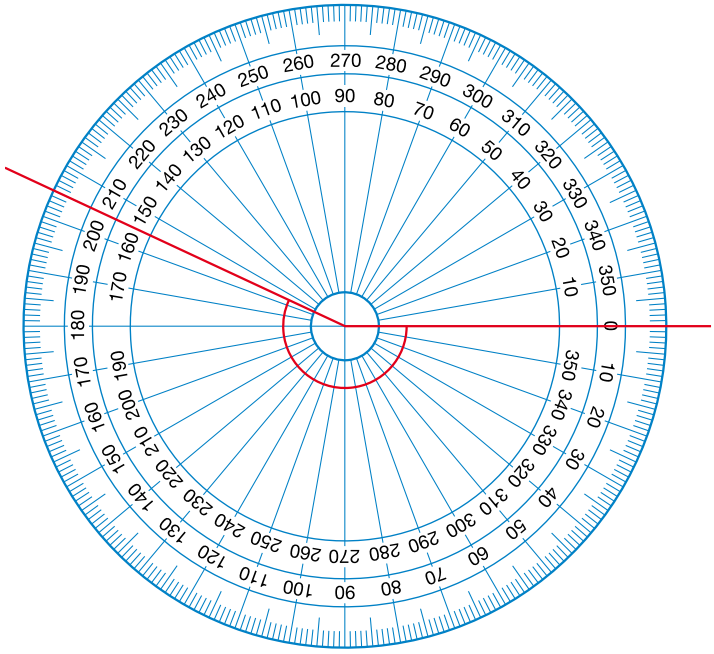


d



explanation 4 online

7 Shaquille is measuring a *reflex* angle between two lines with a 360° protractor.
The diagram shows the angle he is trying to measure.
Shaquille says that the angle is 215°.

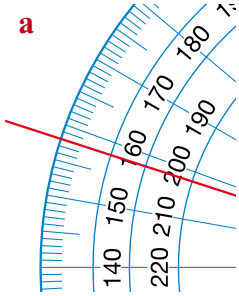


a Explain why Shaquille is wrong.

b What is the size of the angle?

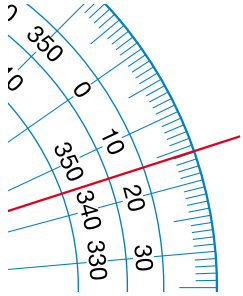
8 Use the information given on these diagrams to find the unknown angles.

a



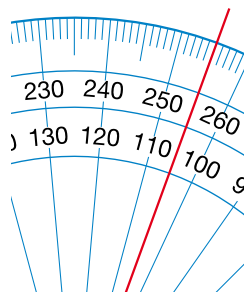
Obtuse

b



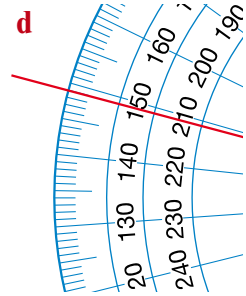
Reflex

c



Obtuse

d



Reflex

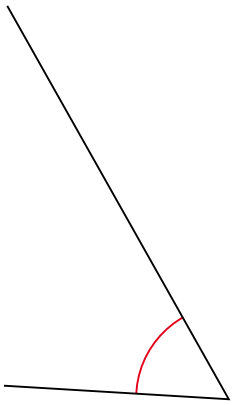
9 For each angle

i Say what type of angle it is

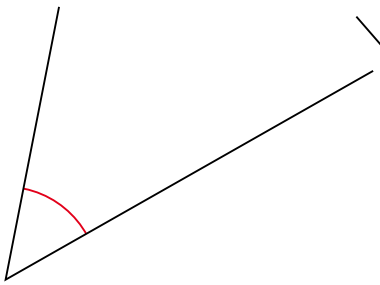
ii Estimate its size

iii Measure its size accurately with a protractor

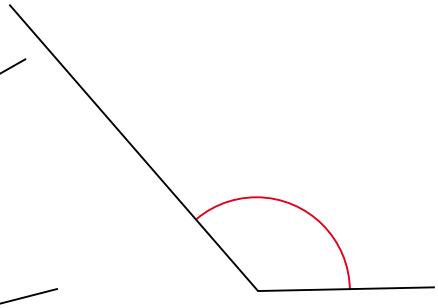
a



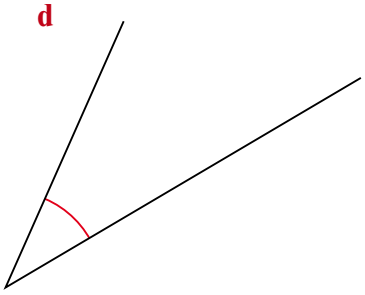
b



c



d



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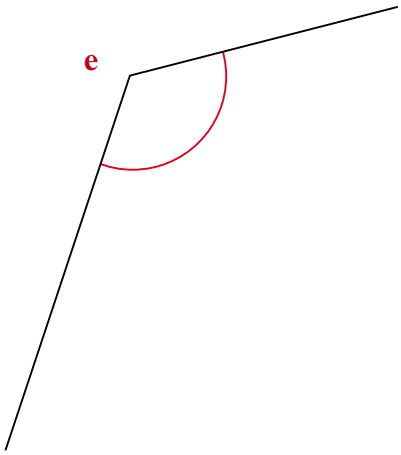

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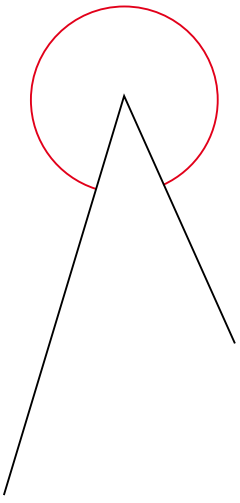

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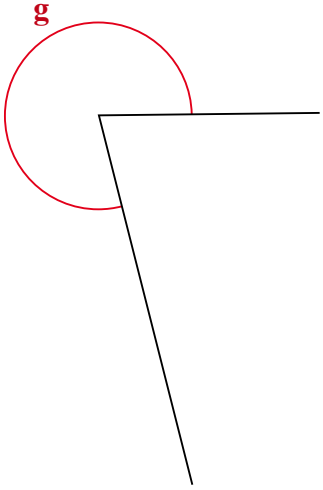
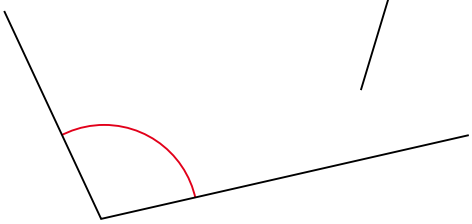
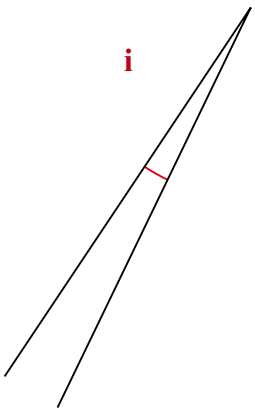


h



i



explanation 5

10 Use a protractor to draw these angles.

a 45° **b** 60° **c** 105° **d** 120°

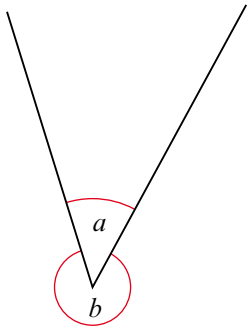
e 87° **f** 102° **g** 138° **h** 171°

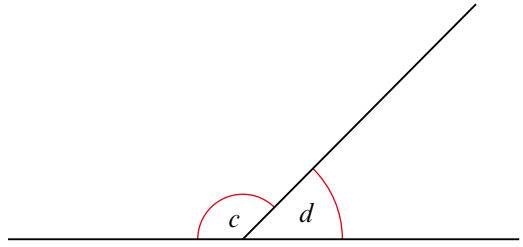
11 Use a protractor to draw these reflex angles.

a 225° **b** 240° **c** 315° **d** 342°

explanation 6a explanation 6b online

12 Here are some angles marked with letters.

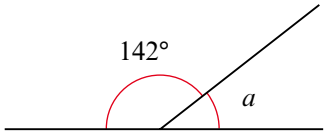


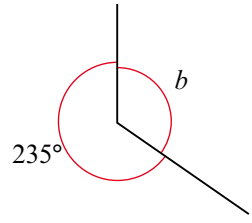


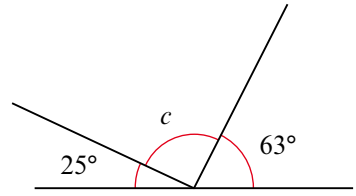
Angles a and b make one full turn. What can you say about the value of $a + b$?

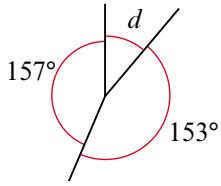
Angles c and d make half of a full turn. What can you say about the value of $c + d$?

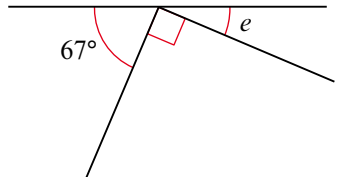
13 Work out the value of each letter. Show your working out.

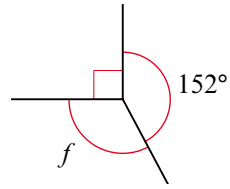






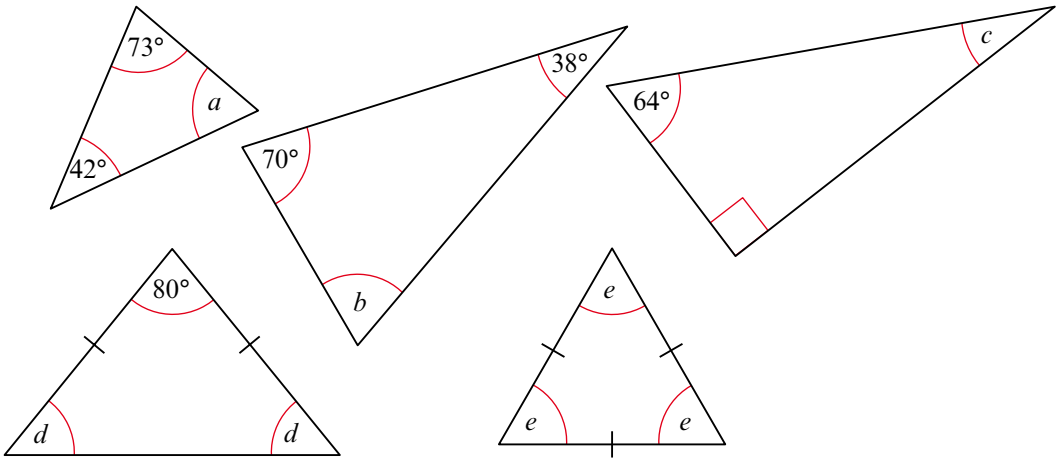






explanation 7a | explanation 7b | online

14 Work out the value of each letter. Show your working out.



15 Work out the value of each letter. Show your working out.