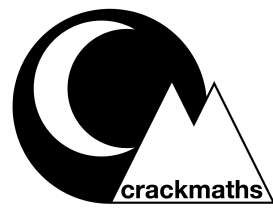
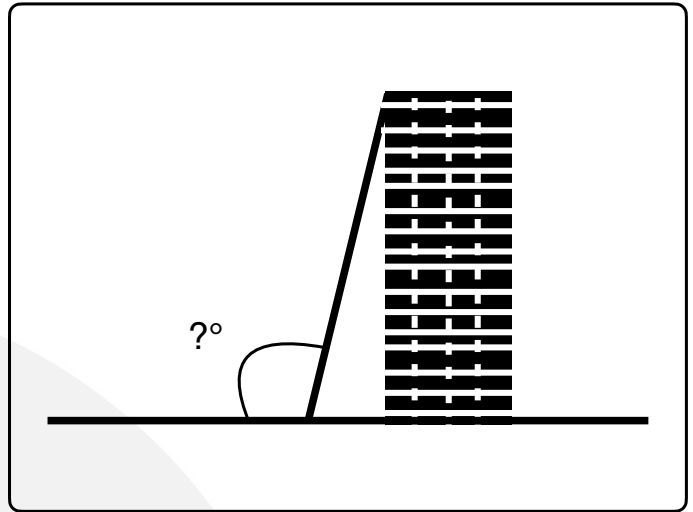


## 57. How to calculate missing angles around a point

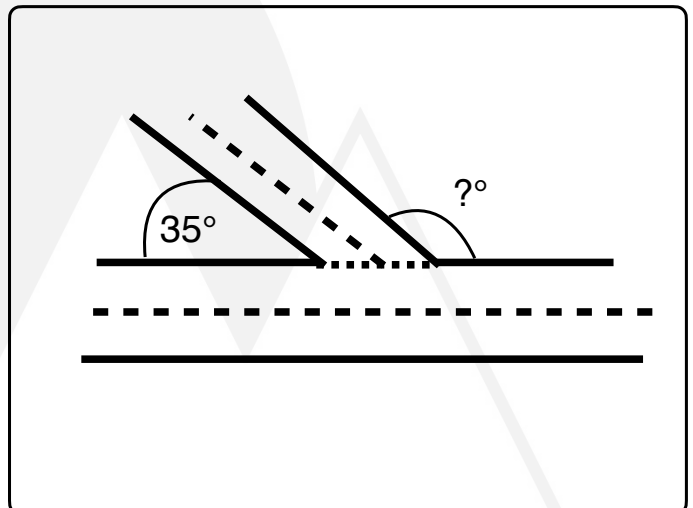


### Scenario Questions:

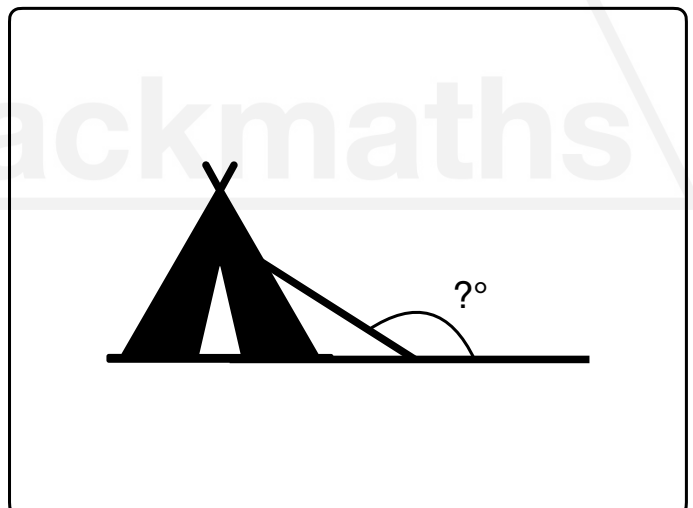
1. A ladder leans on a wall. On one side of the ladder it makes an  $80^\circ$  angle with the ground, what angle is made on the other side?



2. Two roads meet at a T-Junction, the angle they make on one side is  $35^\circ$ . What is the angle on the other side?



3. A guide rope is attached to the ground at a  $45^\circ$  angle. What angle does it make with the ground on the other side?

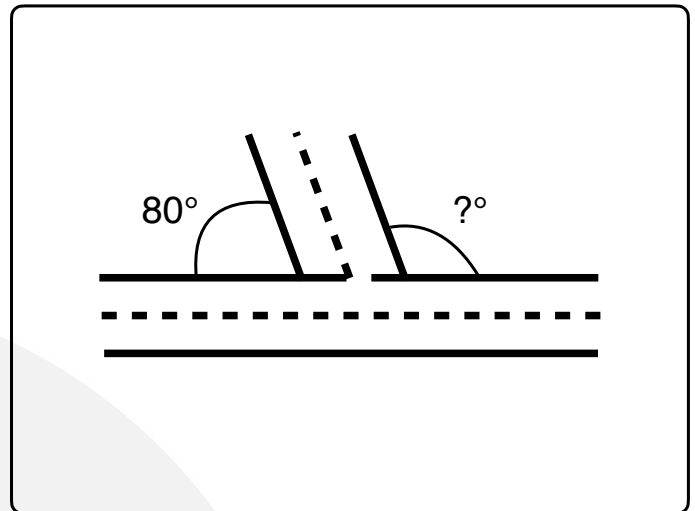


## 57. How to calculate missing angles around a point

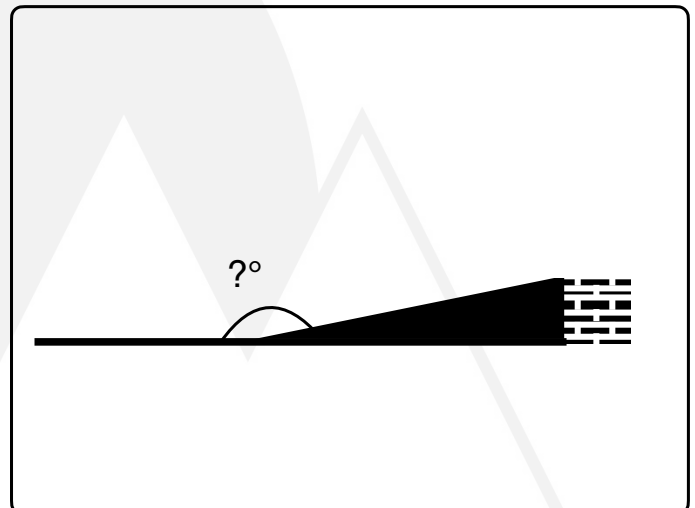


### Scenario Questions:

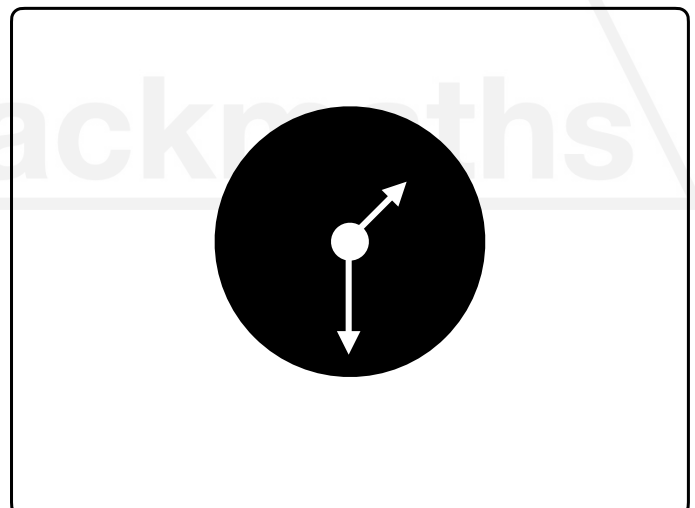
4. At a street intersection, two roads form one angle of  $80^\circ$ . What is the size of the other angle formed between the roads?



5. A ramp is placed against a step. If angle below the ramp with the floor is  $20^\circ$ , what is the size of the angle above the ramp?



6. At 2:30 one angle between the hands of a clock is  $105^\circ$ . What is the size of the other angle between the hands?

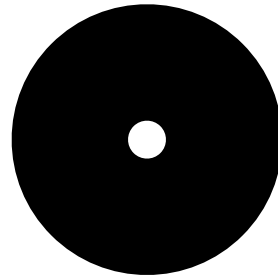


## 57. How to calculate missing angles around a point



### Scenario Questions:

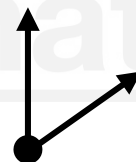
7. Friends are sitting around a circular table. If each person occupies  $72^\circ$  of the table, how many friends are there?



8. Sarah is drawing a flower with 7 petals. If each petal measures 50 degrees, will the petals make a complete circle?



9. Jos is facing north and turns  $35^\circ$  clockwise. How many more degrees must he turn before he is facing north again?



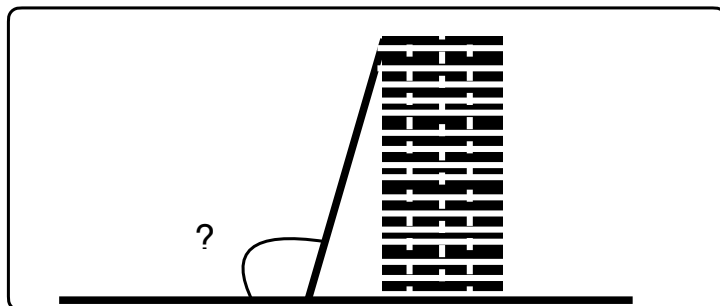
# 57. How to calculate missing angles around a point



## Scenario Questions: **Answers**

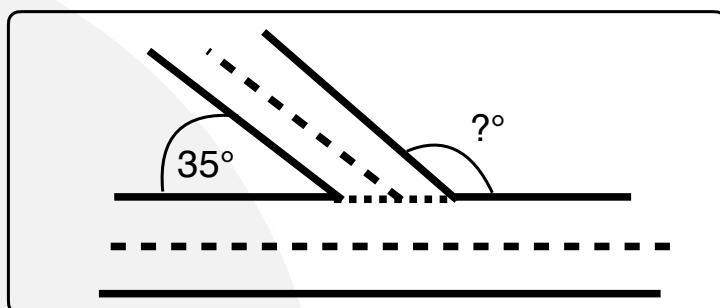
1. A ladder is leaning against a wall, forming a straight line. If one angle between the ground and the ladder measures 80 degrees, what is the measure of the angle between the wall and the ladder?

**1. Missing angle =  $180^\circ - 80^\circ = 100^\circ$ .**



2. Two roads intersect at a point. If one of the angles formed is 35 degrees, what is the measure of the angle?

**2. Missing angle =  $180^\circ - 35^\circ = 145^\circ$ .**



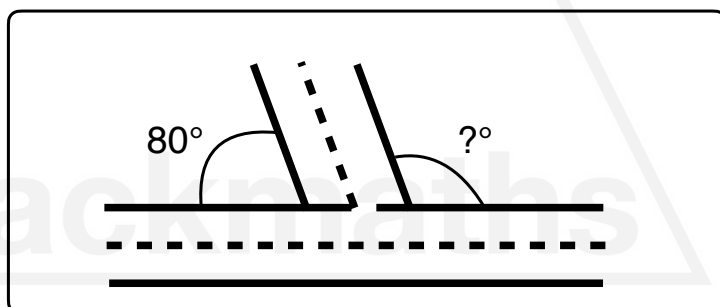
3. A guide rope is attached to the ground at a 45° angle. What angle does it make with the ground on the other side?

**3. Missing angle =  $180^\circ - 45^\circ = 135^\circ$ .**



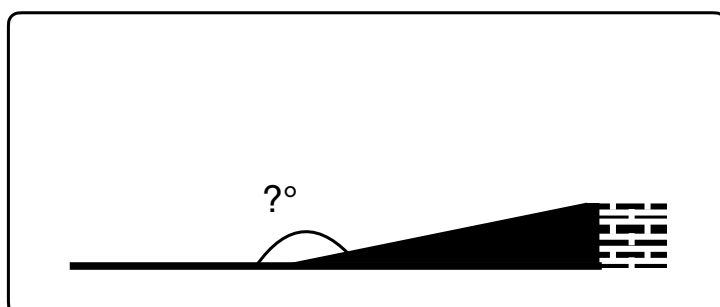
4. At a street intersection, one road forms an angle of 80 degrees with the other road. What is the measure of the missing angle formed between the roads?

**4. Missing angle =  $180^\circ - 80^\circ = 100^\circ$ .**



5. A ramp is placed against a step, forming a straight line with the ground. If one angle on the ramp measures 20 degrees, what is the measure of the angle on the step?

**5. Missing angle =  $180^\circ - 20^\circ = 160^\circ$ .**

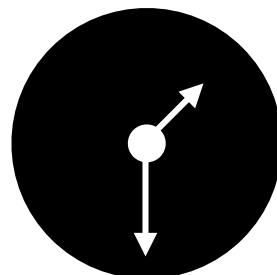


# 57. How to calculate missing angles around a point



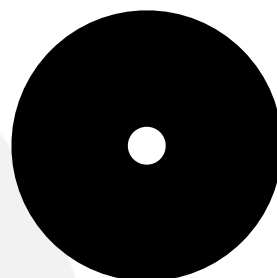
## Scenario Questions: **Answers**

6. In a clock, the minute hand is at the 6 and the hour hand is at the 2 the angle between them is  $105^\circ$ . What is the measure of the reflex angle between the hands?



**6. Missing angle =  $360^\circ - 105^\circ = 255^\circ$ .**

7. At a picnic, a group of friends are sitting around a circular table. If each person occupies 72 degrees of the table, how many friends are there?



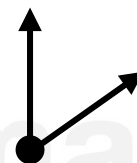
**7. Number of friends =  $360^\circ \div 72^\circ = 5$**

8. Sarah is drawing a flower with 7 petals. If each petal measures 50 degrees, will the petals complete the circle?



**8. No, she will have  $10^\circ$  left:  $360^\circ - (7 \times 50^\circ) = 10^\circ$**

9. Jos is facing north and turns  $35^\circ$  clockwise. How many more degrees must he turn before he is facing north again?



**9. Degrees left to turn =  $360^\circ - 35^\circ = 325^\circ$**