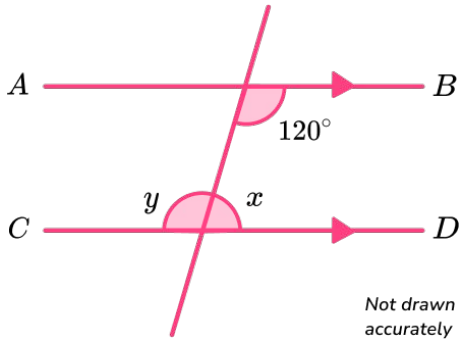
THIRD SPACE LEARNING

# GCSE Exam Questions

## Alternate Angles | Geometry & Measure

# GCSE Exam Questions: Alternate Angles

**1)** **(a)** In the diagram below, $AB$ is parallel to line $CD$




Find the value of $y$. Give a reason for your answer.

**(2)**

**(b)** Find the value of $x$. Give a reason for your answer.

**(2)**

**(4 marks)**

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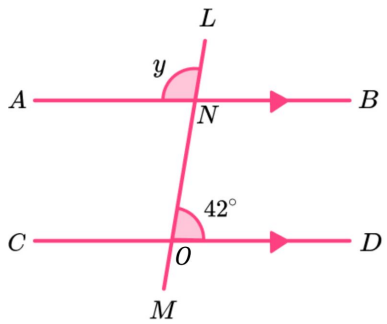
**2)** $AB$ is parallel to $CD$. $LM$ is a straight line. Angle $LOD = 42°$.

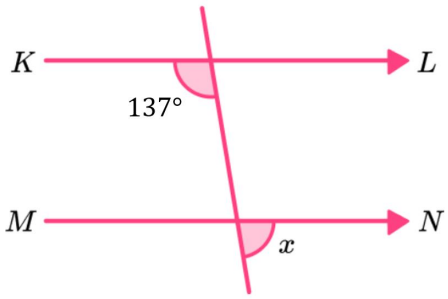



Work out the size of the angle marked $y$.

**(2 marks)**

# GCSE Exam Questions: Alternate Angles

**3) (a)**




Work out the size of the angle marked $x$.

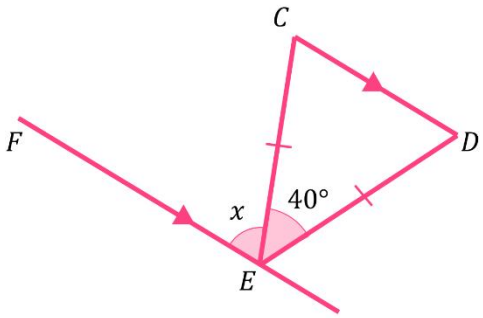
**(2)**

**(b)** Give reasons for your answer.

**(1)**

**(3 marks)**

**4)**




Triangle CDE is isosceles.

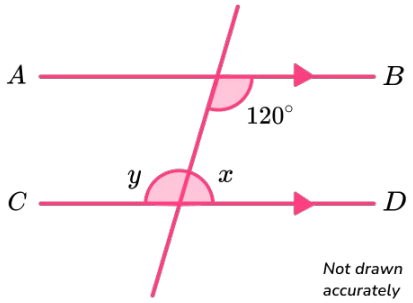
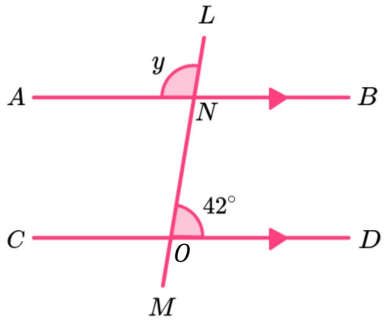
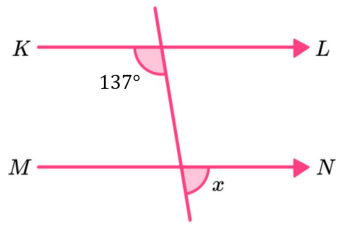
CD is parallel to FE.

Angle $CED = 40°$.

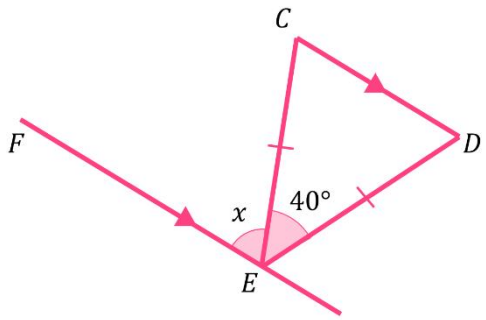
Work out the size of angle $x$.

**(3 marks)**

# GCSE Exam Questions: Alternate Angles Answers

| | Question | Answer | Marks |
|---|---|---|---|
| **1) (a)** | In the diagram below, $AB$ is parallel to line $CD$<br>  <br>Find the value of $y$.<br>Give a reason for your answer. | **(a)** 120°<br>Alternate angles are equal | **(1)**<br>**(1)** |
| **(b)** | Find the value of $x$.<br>Give a reason for your answer. | **(b)** 60°<br>Angles on a straight line add to 180° | **(1)**<br>**(1)** |
| **2)** | AB is parallel to $CD$. $LM$ is a straight line.<br>Angle $LMD = 42$.<br>  <br>Work out the size of the angle marked $y$. | 180 - 42<br>$y = 138°$ | **(1)**<br>**(1)** |
| **3) (a)** |  <br>Work out the size of the angle marked $x$. | **(a)** 180 - 137<br>$y = 43°$ | **(1)**<br>**(1)** |
| **(b)** | Give reasons for your answer. | **(b)** Alternate angles are equal and angles on a straight line add to 180° **or** alternatives which fit the workings. | **(1)** |

# GCSE Exam Questions: Alternate Angles Answers

| | Question | Answer | Marks |
|---|---|---|---|
| **4)** |  <br>Triangle CDE is isosceles.<br>CD is parallel to FE.<br>Angle *CED* = 40°.<br>Work out the size of angle *x*. | 180 - 40 = 140<br>140 ÷ 2 = 70<br>*x* = 70° | **(1)**<br>**(1)**<br>**(1)** |

# Where to go next?

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