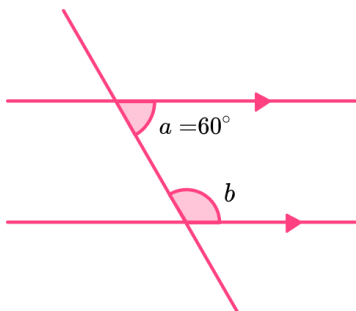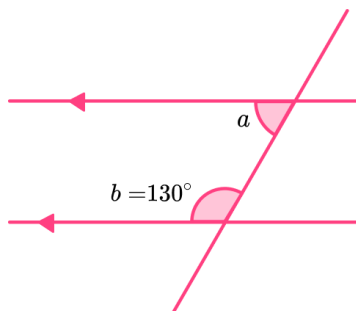# Co interior Angles - Worksheet

Skill

Group A - Two angles that are co interior

Find the missing angles:
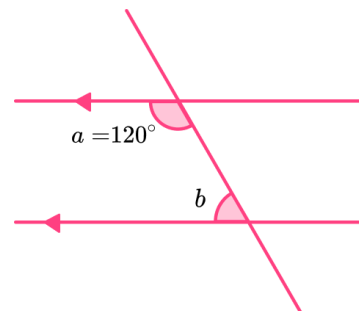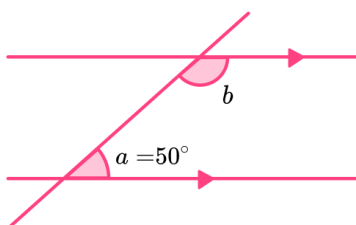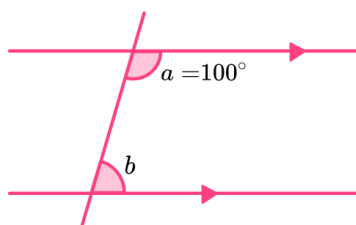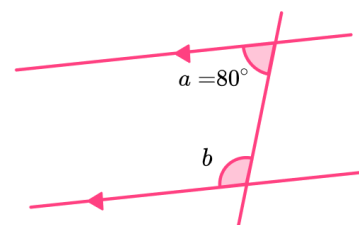
1)

$a = 60°$

b

2)

a

$b = 130°$

3)

$a = 120°$

b

4)

b

$a = 50°$

5)

$a = 100°$

b

6)

$a = 80°$

b

7)

a

$b = 131°$

8)

$a = 110°$

b

9)

b

$a = 85°$

10)

b

$a = 37°$

11)

$a = 55°$

b

12)

$a = 49°$

b
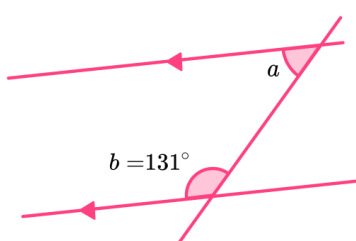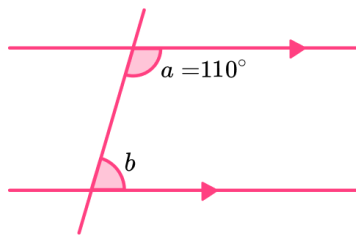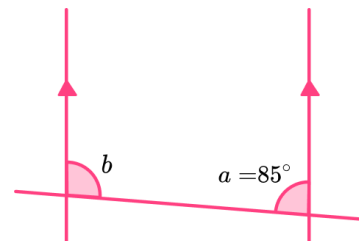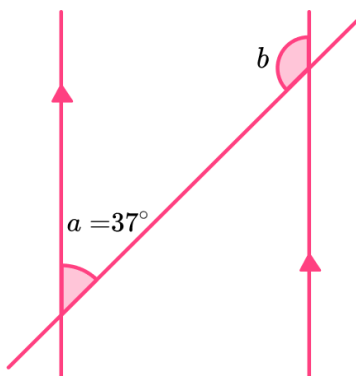
Co interior Angles - Worksheet

Group B - Co interior angles problems

Find the missing angles:

1)

c

$d = 93°$

$a = 55°$

b

2)

c

$d = 102°$

b

$a = 37°$

3)

c

$d = 94°$

$a = 49°$

b

4)

c

$d = 58°$

$a = 32°$

b

5)

$a = 60°$ $c = 68°$

b d

6)

b c

$a = 85°$

7)

b

c

$a = 95°$

8)

$c = 47°$

$a = 98°$

d

b

9)

b c

$a = 92°$

10)

b c

$a = 88°$

11)

b e c

$a = 88°$ d

12)

c

a

$d = 133°$

$b = 82°$

e
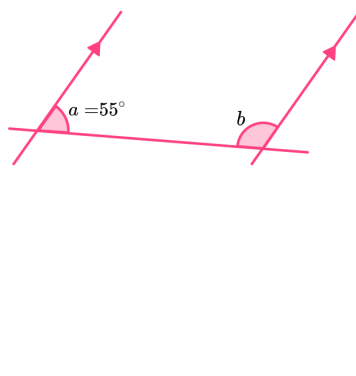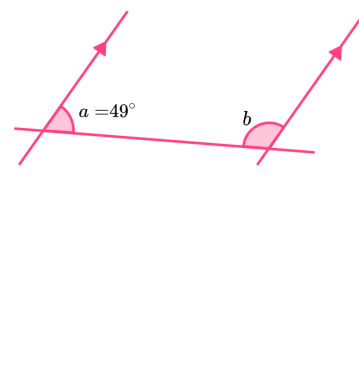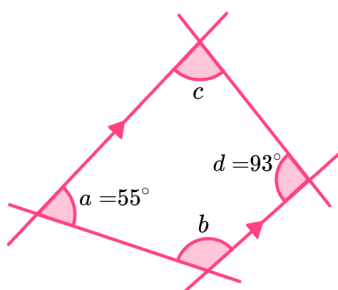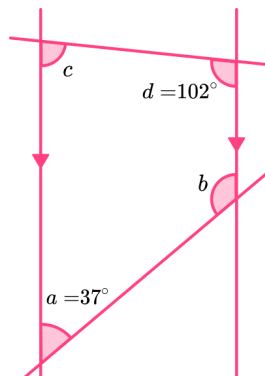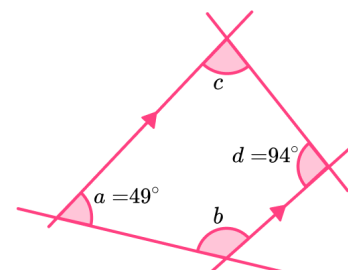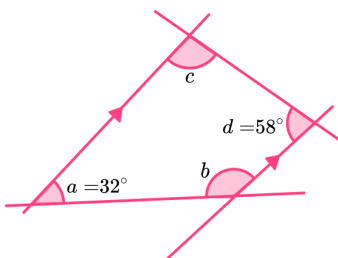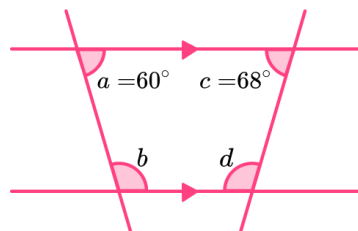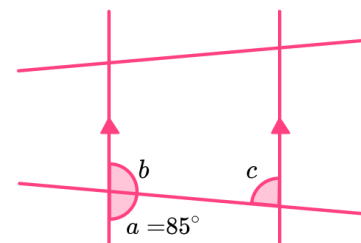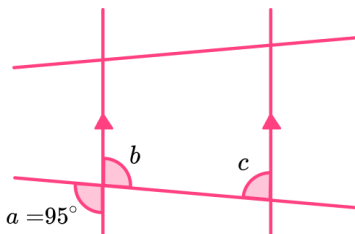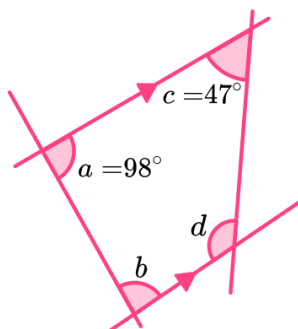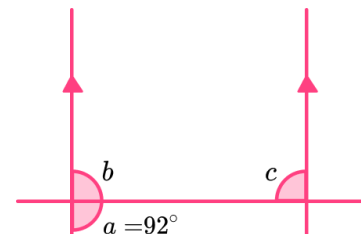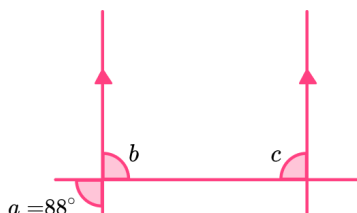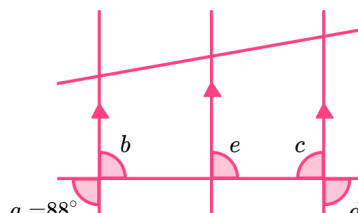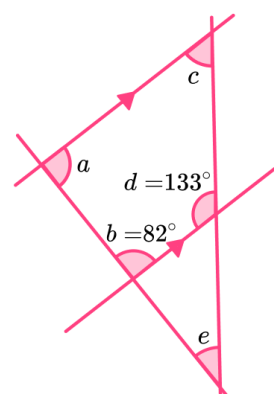
Co interior Angles - Worksheet

Group C - Algebraic co interior angles

Find the unknown variable in each question:

1)

a

$2a$

2)

$2b$

$7b$

3)

$4c$

$6c$

4)

$(2d+5)^\circ$

$(3d-5)^\circ$

5)

$(3e-10)^\circ$

$(4e-20)^\circ$

6)

$5f$

$(2f-9)^\circ$

7)

$(4g+8)^\circ$

$(5g-8)^\circ$

8)

$(2h+10)^\circ$

$(5+h)^\circ$

9)

$(j+9)^\circ$

$(2j-18)^\circ$

10)

$6k$

$3k$

11)

$2m$ $^\circ$

$2m-100$ $^\circ$

12)

$(4p+30)^\circ$

$(10+3p)^\circ$
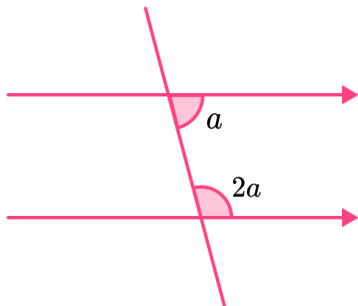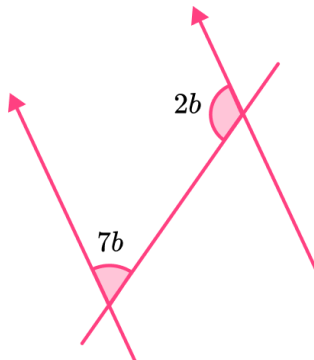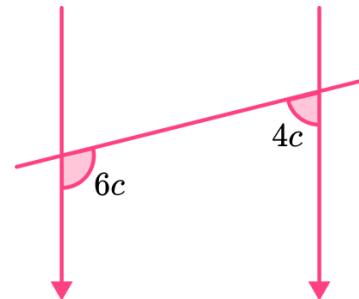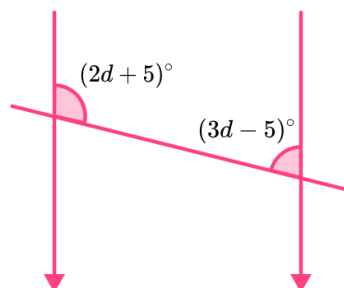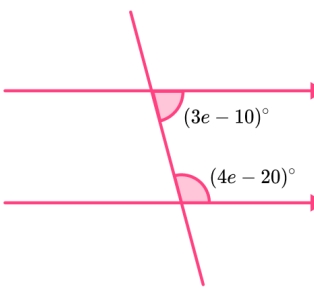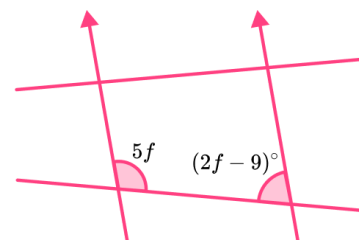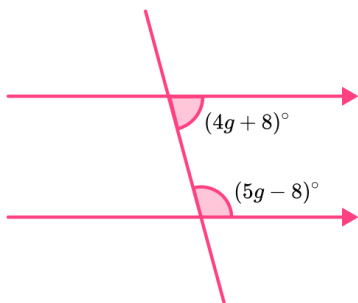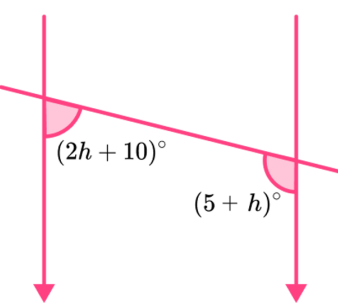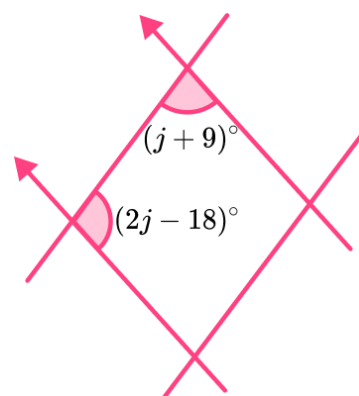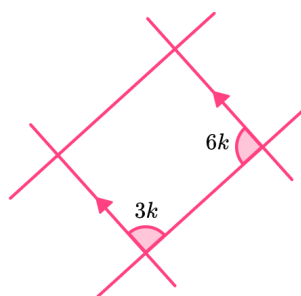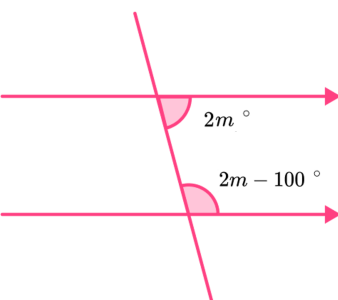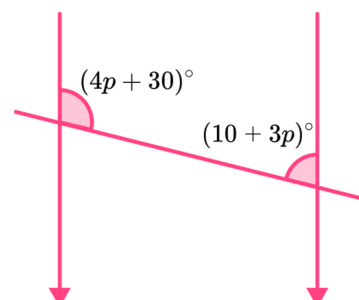
Co interior Angles - Worksheet

Applied

1)   Find the missing angles.

$c = 60°$

h

g

$a = 60°$

b $d = 120°$ j

f

i

e
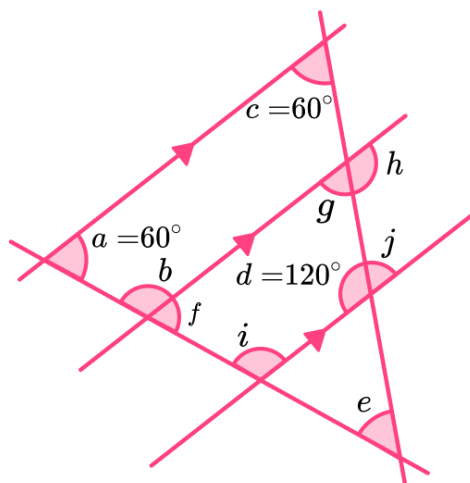
Give reasons for your answers.

2)   Find the missing angles.

c $d = 82°$

e h f

$i = 98°$

b

g

$a = 47°$
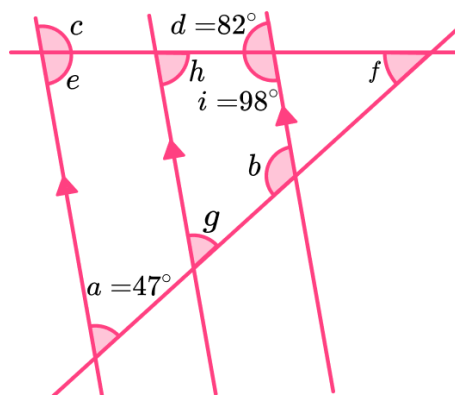
Give reasons for your answers.

3)   Find the missing angles.

$d = 39°$

c b

e $a = 88°$

Give reasons for your answers.

thirdspacelearning.com   Helping schools close the maths attainment gap through targeted one to one teaching and flexible resources

4
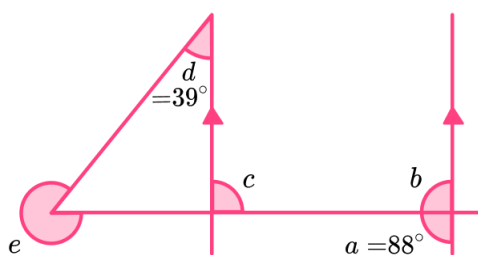
Co interior Angles - Exam Questions

1) **(a)** Work out the size of the angle marked x.

x $109°$

....
(1)
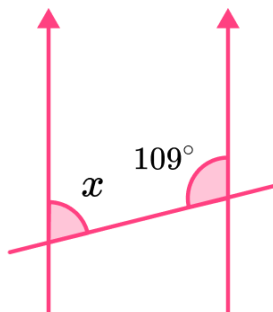
(b) Give a reason for your answer.

....
(1)
(2 marks)

---

2) **(a)** Below is a quadrilateral.

B C

$120°$ $57°$

A

D
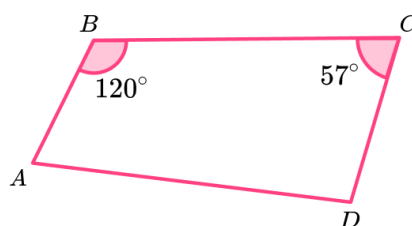
Is AB parallel to CD? Give a reason for your answer.

....
(2 marks)

Co interior Angles - Exam Questions

3) **(a)** AB is parallel to CD.
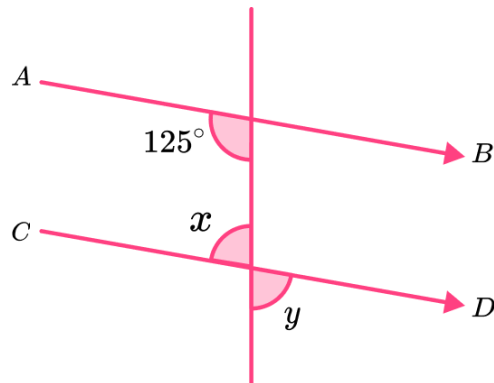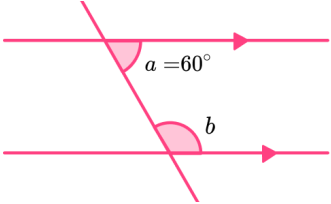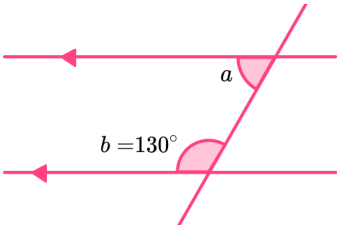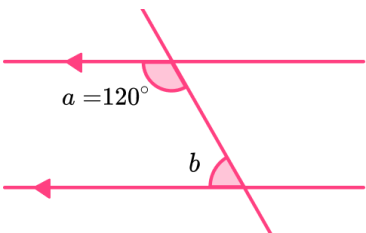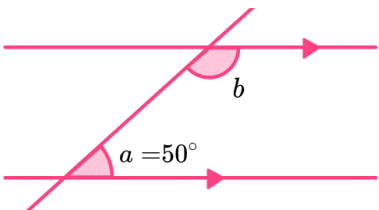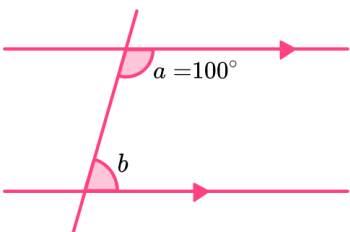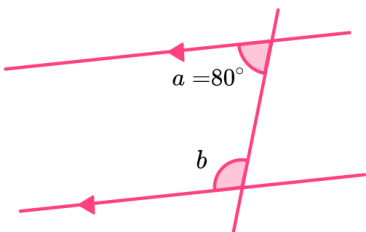
Work out the size of the angle marked x. Give a reason for your answer.

....

(2)
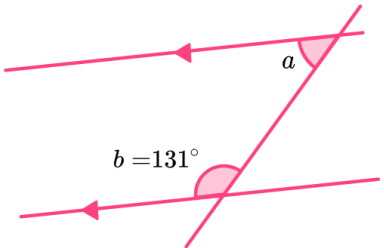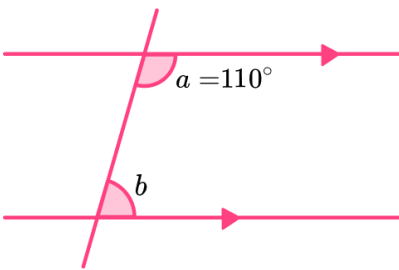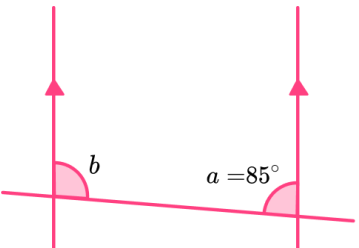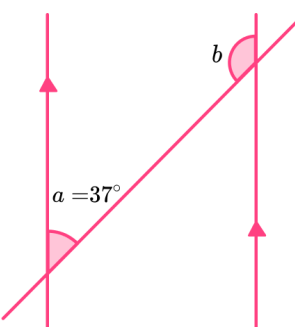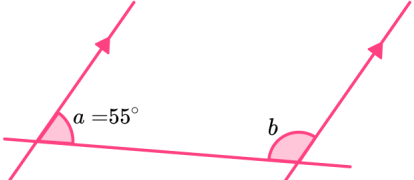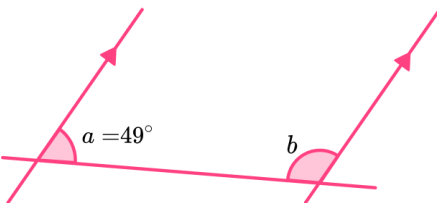
(b) Write down the value of y. Give a reason for your answer.

....

(2)

(4 marks)

thirdspacelearning.com   Helping schools close the maths attainment gap through targeted one to one teaching and flexible resources

6
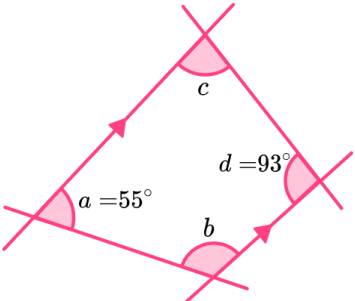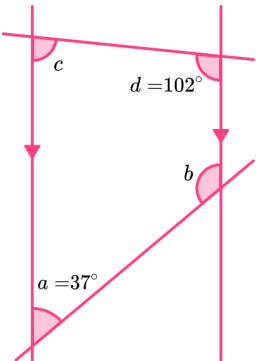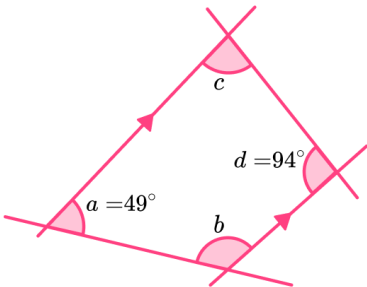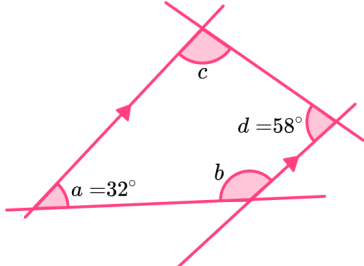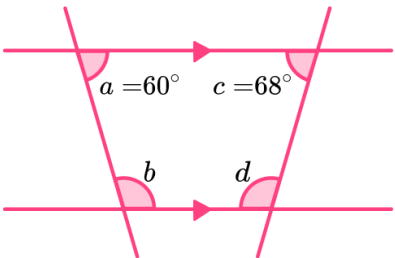
Co interior Angles -Answers

	Question	Answer
	Skill Questions	
Group A	Find the missing angles:	
	1)	**1)** 120°
	2)	**2)** 50°
	3)	**3)** 60°
	4)	**4)** 130°
	5)	**5)** 80°
	6)	**6)** 100°
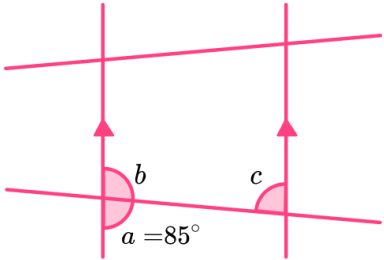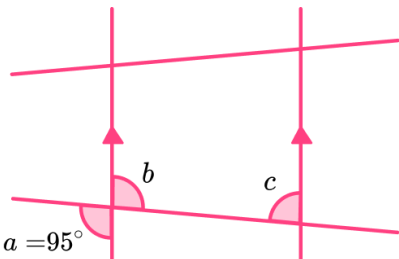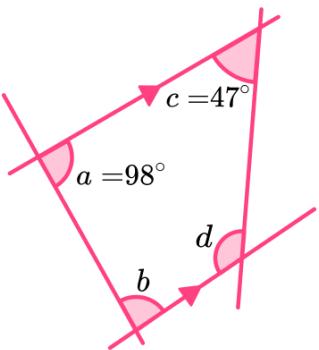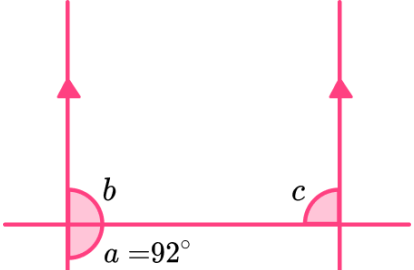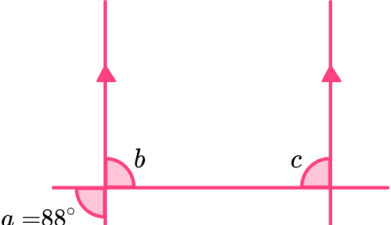
Co interior Angles - Answers

Group A contd		
7)	$b = 131°$, a	**7)** 49°
8)	$a = 110°$, b	**8)** 70°
9)	b, $a = 85°$	**9)** 95°
10)	b, $a = 37°$	**10)** 143°
11)	$a = 55°$, b	**11)** 125°
12)	$a = 49°$, b	**12)** 131°

thirdspacelearning.com   Helping schools close the maths attainment gap through targeted one to one teaching and flexible resources

8
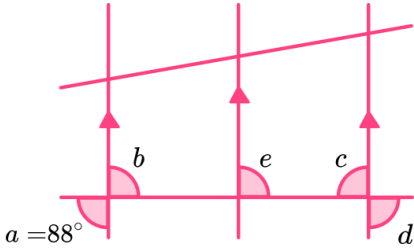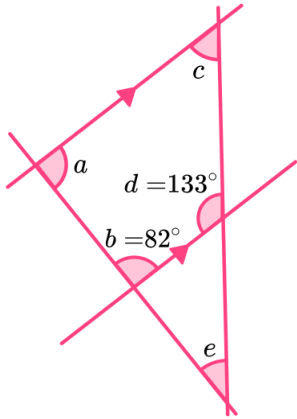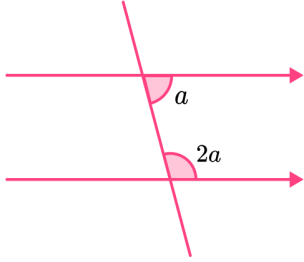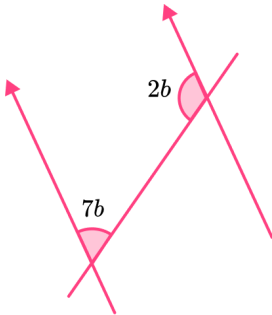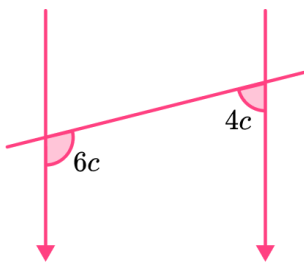
Co interior Angles - Answers

Group B	Find the missing angles:	
	1)	**1)** $b = 125°$, $c = 87°$
	2)	**2)** $b = 143°$, $c = 78°$
	3)	**3)** $b = 131°$, $c = 86°$
	4)	**4)** $b = 148°$, $c = 122°$
	5)	**5)** $b = 120°$, $c = 112°$
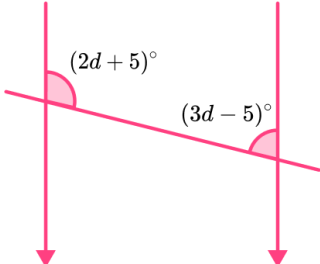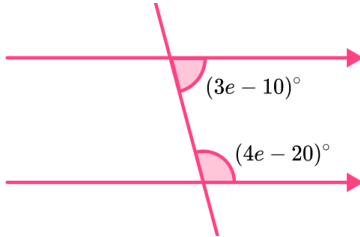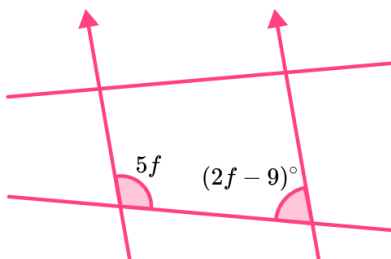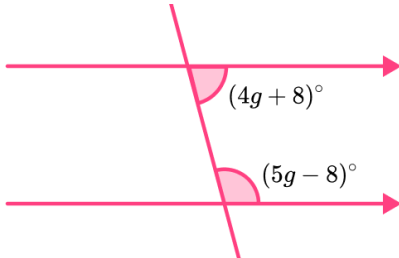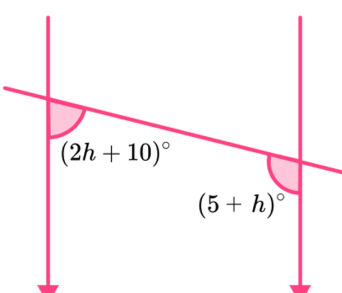
Co interior Angles - Answers

Group B contd	6)	6) $b = 95°$, $c = 85°$
	7)	7) $b = 95°$, $c = 85°$
	8)	8) $b = 82°$, $c = 133°$
	9)	9) $b = 88°$, $c = 92°$
	10)	10) $b = 88°$, $c = 92°$

thirdspacelearning.com   Helping schools close the maths attainment gap through targeted one to one teaching and flexible resources

10

THIRD SPACE
LEARNING
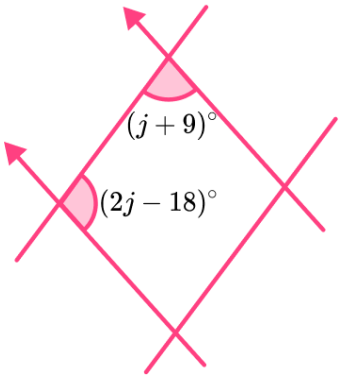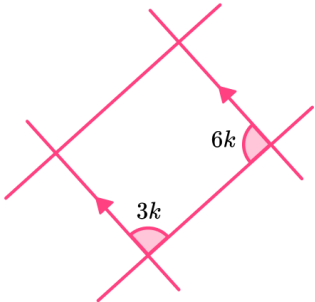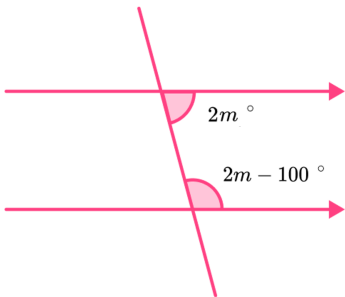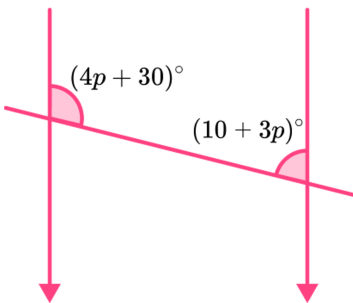
Co interior Angles - Answers

Group B contd	**11)**	**11)** $b = 88°$, $c = 92°$, $d = 92°$, $e = 88°$
	12)	**12)** $a = 98°$, $c = 47°$, $e = 35°$
Group C	Find the unknown variable in each question:	
	1)	**1)** $a = 60$
	2)	**2)** $b = 20$
	3)	**3)** $c = 18$
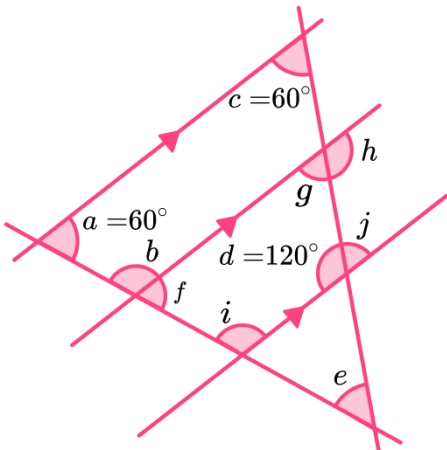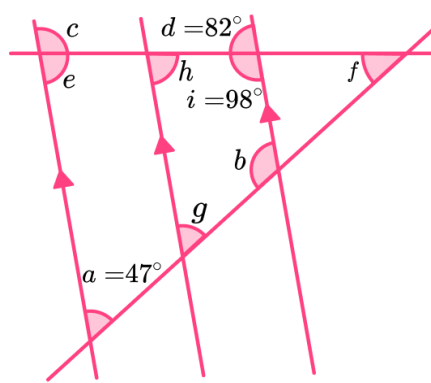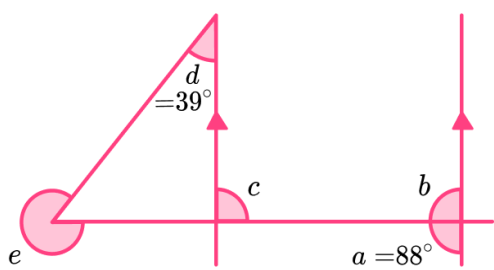
Co interior Angles - Answers

Group C contd	4)	4) $d = 36$
	5)	5) $e = 30$
	6)	6) $f = 27$
	7)	7) $g = 20$
	8)	8) $h = 55$

4) $(2d + 5)^\circ$ $(3d - 5)^\circ$

5) $(3e - 10)^\circ$ $(4e - 20)^\circ$

6) $5f$ $(2f - 9)^\circ$

7) $(4g + 8)^\circ$ $(5g - 8)^\circ$

8) $(2h + 10)^\circ$ $(5 + h)^\circ$

thirdspacelearning.com   Helping schools close the maths attainment gap through targeted one to one teaching and flexible resources

12
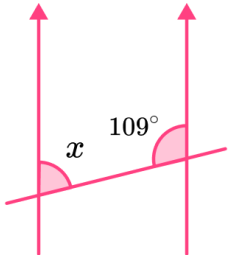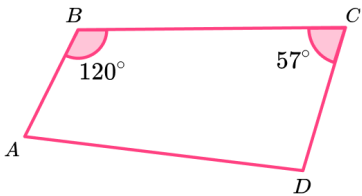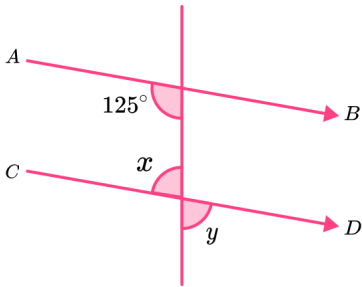
Co interior Angles - Answers

Group C contd	9)	9) $j = 63$
	10)	10) $k = 20$
	11)	11) $m = 70$
	12)	12) $p = 20$

9)

$(j + 9)^\circ$

$(2j - 18)^\circ$

10)

$6k$

$3k$

11)

$2m\ ^\circ$

$2m - 100\ ^\circ$

12)

$(4p + 30)^\circ$

$(10 + 3p)^\circ$

Co interior Angles - Answers

	Question	Answer
	Applied Questions	
1)	Find the missing angles. Give reasons for your answers.	$b = 120°$ Co interior angles add to 180° $e = 60°$ Angles in a triangle add to 180° $f = 60°$ Angles on a straight line add to 180° $g = 60°$ Co interior angles add to 180° $h = 120°$ Angles on a straight line add to 180° $i = 120°$ Co interior angles add to 180° $j = 60°$ Angles on a straight line add to 180°
2)	Find the missing angles. Give reasons for your answers.	$b = 133°$ Co interior angles add to 180° $c = 98°$ Co interior angles add to 180° $e = 82°$ Angles on a straight line add to 180° $f = 51°$ Angles in a triangle add to 180° $g = 47°$ Co interior angles add to 180° $h = 82°$ Co interior angles add to 180°
3)	Find the missing angles. Give reasons for your answers.	$b = 92°$ Angles on a straight line add to 180° $c = 88°$ Co interior angles add to 180° $e = 311°$ Angles around a point add to 360° (Angles in triangle are $d = 39°, 92°$ and $49°$)

thirdspacelearning.com   Helping schools close the maths attainment gap through targeted one to one teaching and flexible resources

14

Co interior Angles - Mark Scheme

	Question	Answer	
	Exam Questions		
1) (a)	Work out the size of the angle marked x.	**(a)** 71°	**(1)**
(b)	Give a reason for your answer.	**(b)** Co interior angles add to 180°	**(1)**
2) (a)	Below is a quadrilateral. Is AB parallel to CD? Give a reason for your answer.	**(a)** 120 + 57 = 177 No **and** the sum of co-interior angles is not equal to 180° **oe**	**(1)** **(1)**
3) (a)	AB is parallel to CD. Work out the size of the angle marked x. Give a reason for your answer.	**(a)** 55° Co interior angles add to 180°	**(1)** **(1)**
(b)	Write down the value of y. Give a reason for your answer.	**(b)** 55° Vertically opposite angles are equal	**(1)** **(1)**