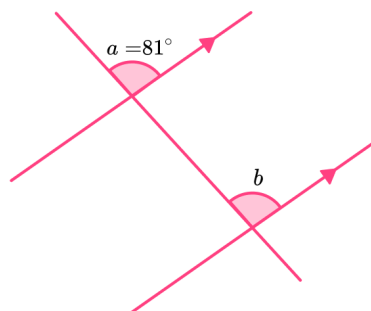# Corresponding Angles - Worksheet

Skill
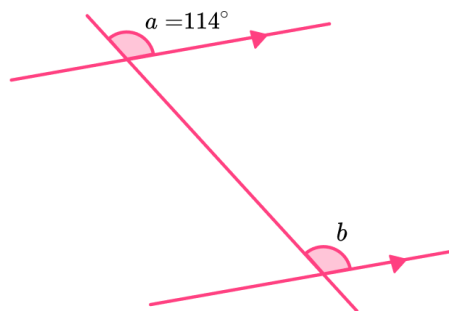
Group A - Two angles that are corresponding

Find the missing angles:
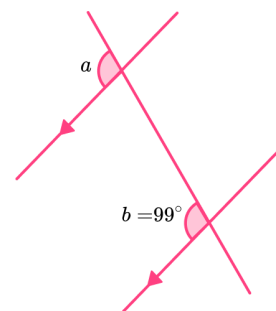
1)

$a = 81°$

b

2)

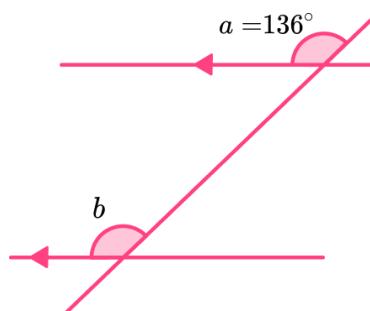$a = 114°$

b

3)

a

$b = 99°$

4)

a

$b = 66°$

5)

$a = 136°$

b

6)

$a = 148°$

b

7)

a

$b = 145°$

8)

$a = 75°$

b

9)

a

$b = 58°$

10)

a c

$b = 58°$ $d = 58°$

11)

c $a = 136°$

$d = 136°$ b

12)

c $a = 148°$

$d = 148°$ b
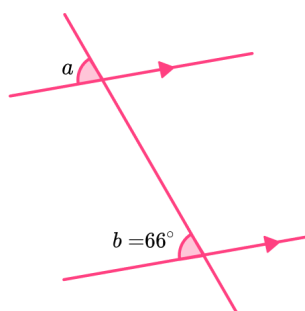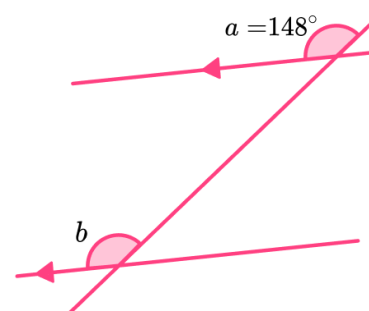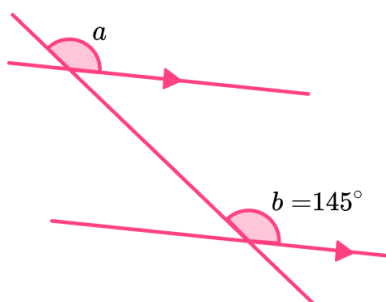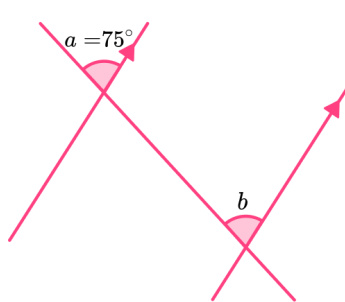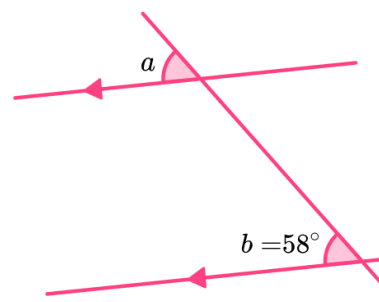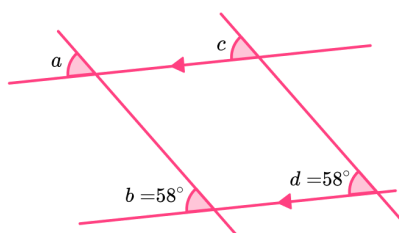
Corresponding Angles - Worksheet

Group B - Corresponding angles problems

Find the missing angles:

1)

$a = 80°$ b

c

2)

b
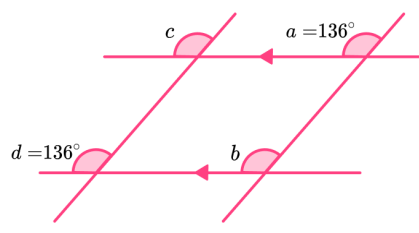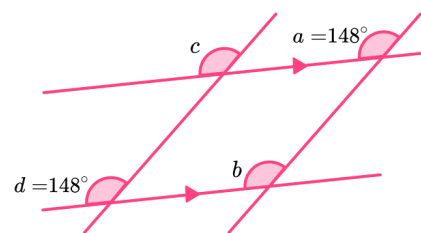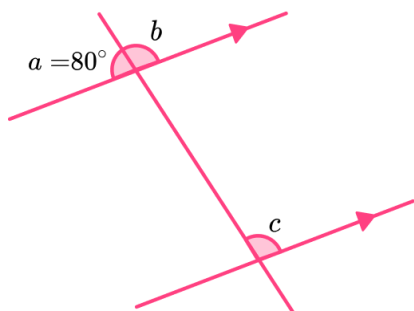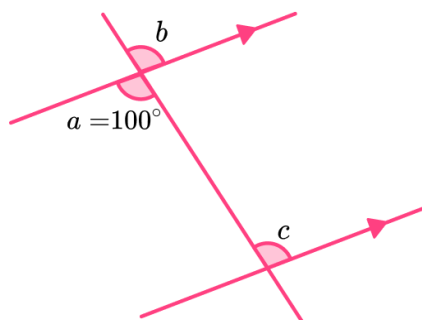
$a = 100°$
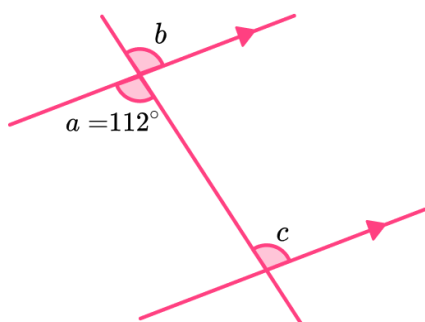
c

3)

$a = 62°$ b

c

4)

b

$a = 112°$

c

5)

b

$a = 70°$

c

6)

b

$a = 47°$ c

7)

d

c

$a = 34°$ $b = 60°$ e

8)

d

c

$a = 41°$

$b = 44°$ e

f

9)

$g = 100°$

f

$c = 47°$

d e

$a = 127°$ b

10)

d

c

$a = 43°$

$b = 3$ °$ e

f

11)

$g = 94°$

c

f

e d

$a = 139°$ b

12)

d

c

$a = 38°$

$b = 62°$ e

f

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2
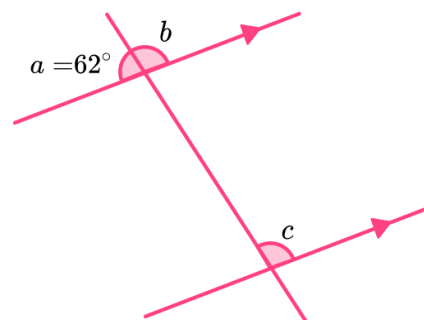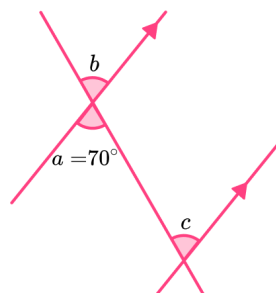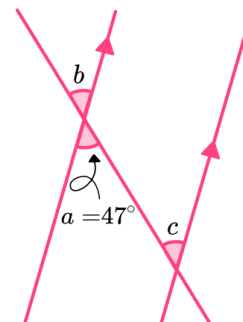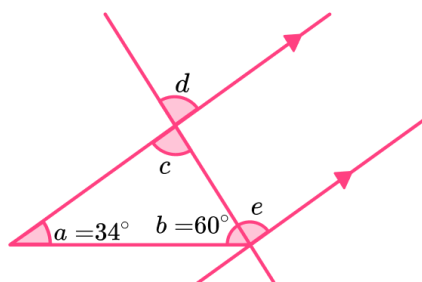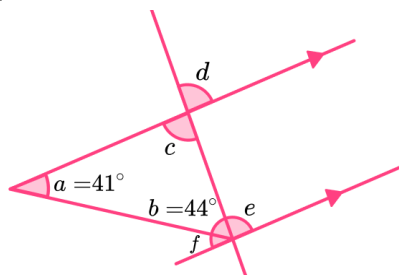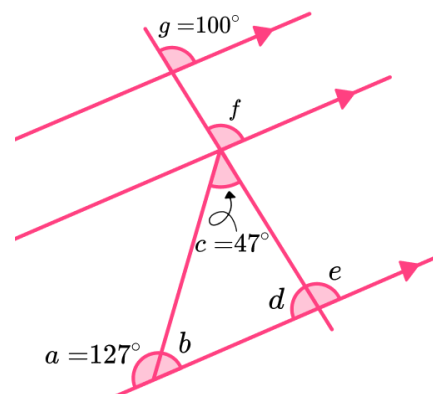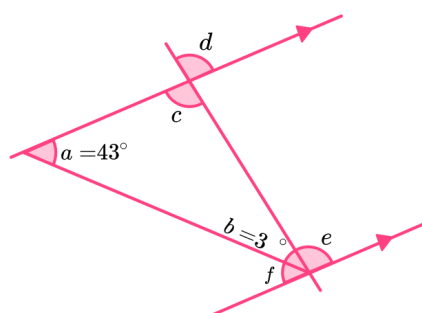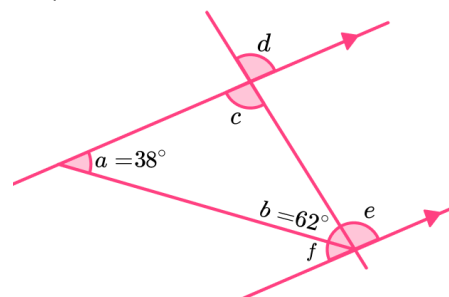
Corresponding Angles - Worksheet

Group C - Algebraic corresponding angles

Find the unknown variable in each question:

1)

$5a$

$75°$

2)

$108°$

$(2b + 10)°$

3)

$4c$

$88°$

4)

$7e$

$49°$

5)

$(5x - 26)°$

109

6)

$45°$

$(2f - 18)°$

7)

$(5d - 8)°$

$92°$

8)

$(5p + 38)°$

$6p$

9)

$(10j - 4)°$

$(8j + 32)°$

10)

$(2k + 8)°$

$(k + 20)°$

11)

$(7m + 38)°$

$(10m + 2)°$

12)

$(4h + 40)$

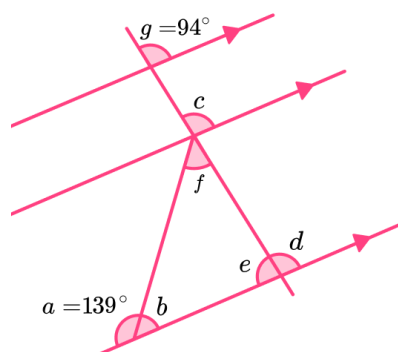$(5h + 10)°$
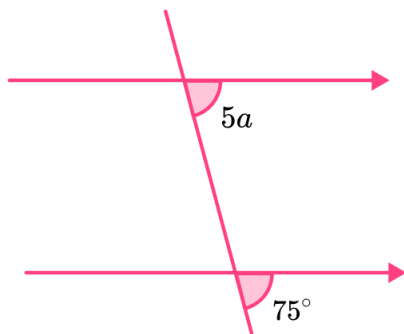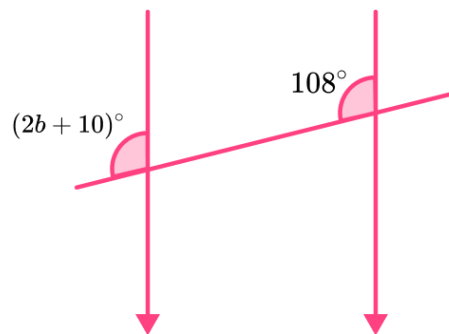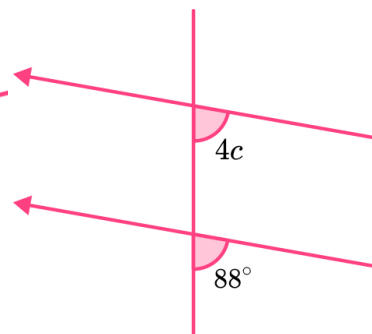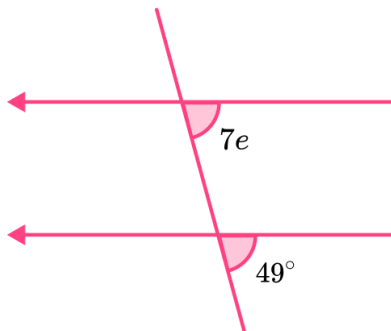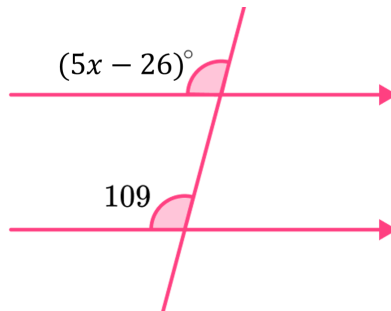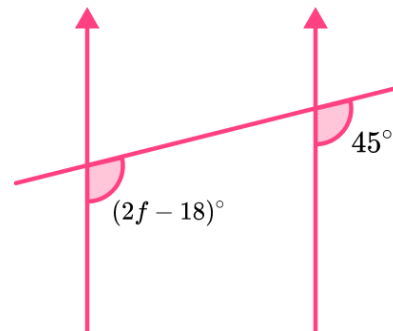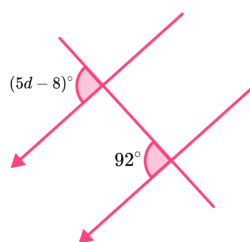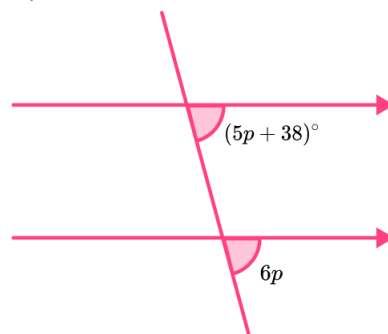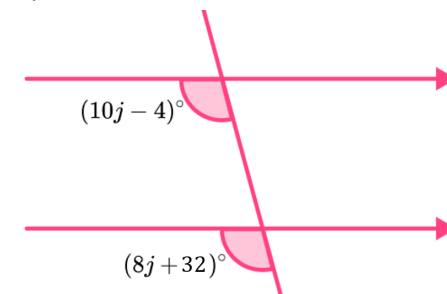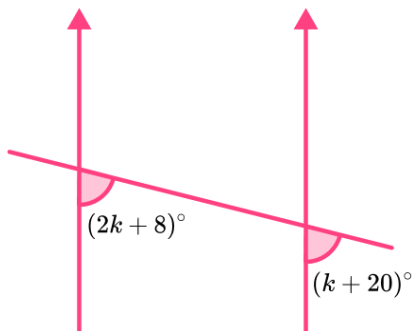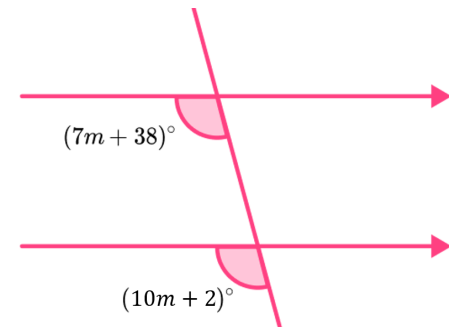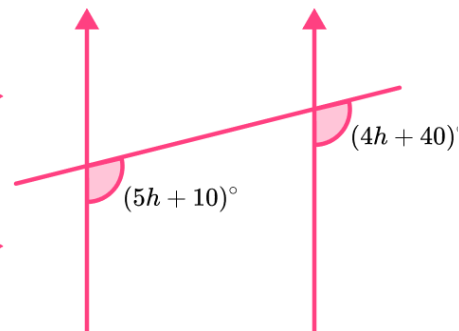
Corresponding Angles - Worksheet

Applied

1)   Find the missing angles.
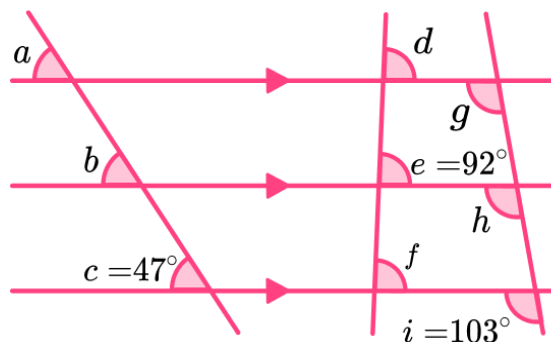
2)   Find the missing angles.

3)   Find the missing angles.

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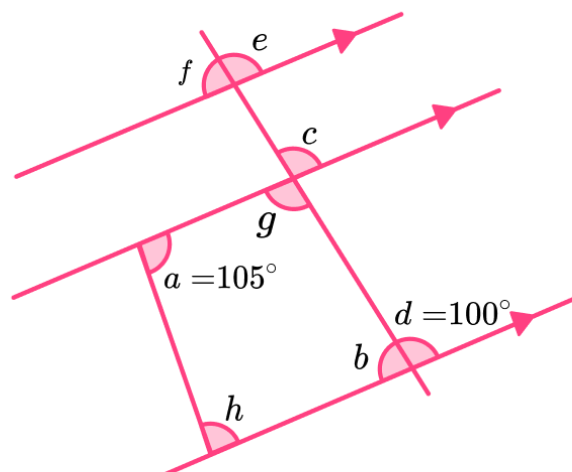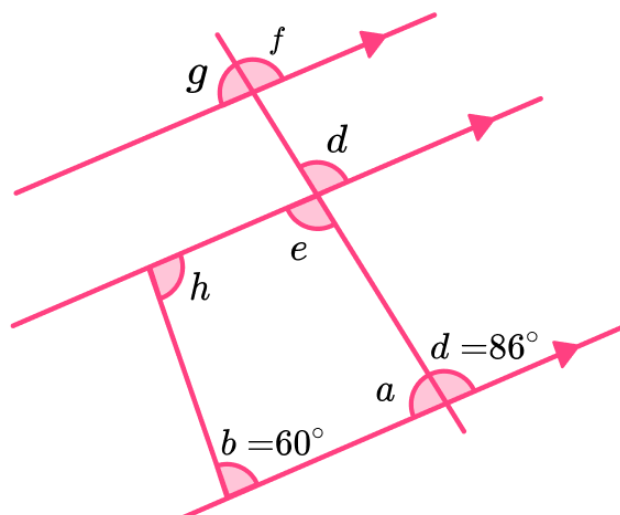
Corresponding Angles - Exam Questions

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

Find the value of x. Give a reason for your answer.

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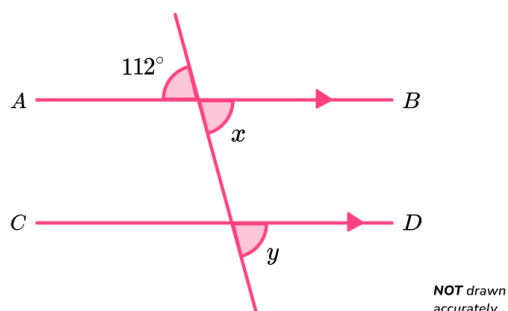
(b) Find the value of y. Give a reason for your answer.

....
(2)
(4 marks)

2) In the diagram below, *AB* is parallel to line *CD*
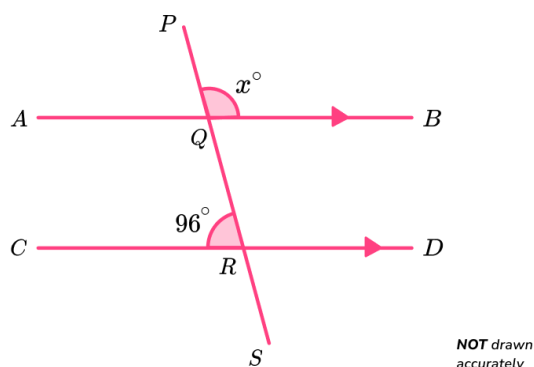
Find the value of x. Give reasons for your answer.

....
(4 marks)

Corresponding Angles - Exam Questions

3)   Shown below is an isosceles triangle.
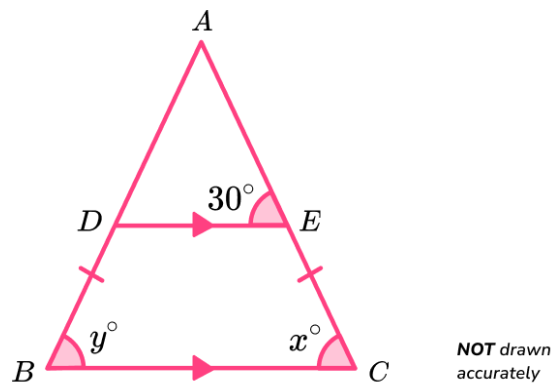
Lines DE and BC are parallel, and $AB = AC$.

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

....
(2)

(b)   Find the value of y. Give a reason for your answer.

....
(2)
(4 marks)

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Corresponding Angles - Answers
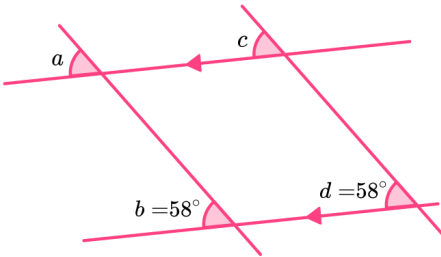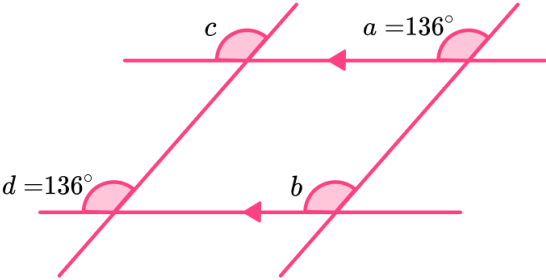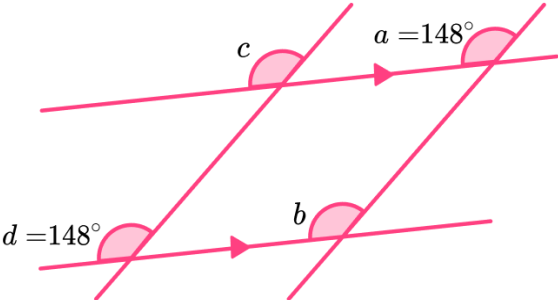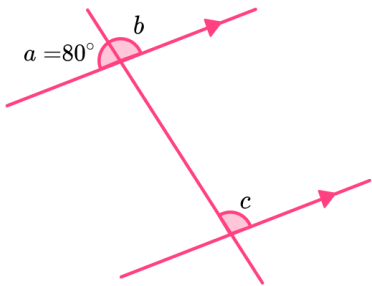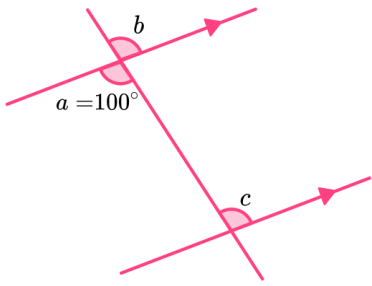
	Question	Answer
	Skill Questions	
Group A	Find the missing angles: **1)** **2)** **3)** **4)**	**1)** $b = 81°$ **2)** $b = 114°$ **3)** $a = 99°$ **4)** $a = 66°$

Corresponding Angles - Answers

Group A contd		
5)	$a = 136°$ b	**5)** $b = 136°$
6)	$a = 148°$ b	**6)** $b = 148°$
7)	a $b = 145°$	**7)** $a = 145°$
8)	$a = 75°$ b	**8)** $b = 75°$
9)	a $b = 58°$	**9)** $a = 58°$

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Corresponding Angles - Answers

Group A contd	10)	10) $a = 58°$, $c = 58°$
	11)	11) $b = 136°$, $c = 136°$
	12)	12) $b = 148°$, $c = 148°$
Group B	Find the missing angles: 1)	1) $b = 100°$, $c = 100°$
	2)	2) $b = 100°$, $c = 100°$

Corresponding Angles - Answers
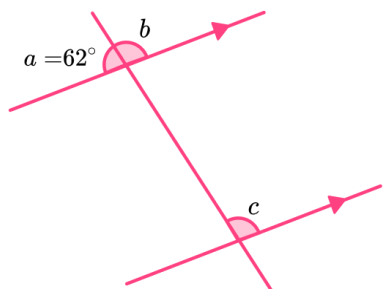
Group B contd	3)	**3)** $b = 118°$, $c = 118°$
	4)	**4)** $b = 112°$, $c = 112°$
	5)	**5)** $b = 70°$, $c = 70°$
	6)	**6)** $b = 47°$, $c = 47°$
	7)	**7)** $c = 86°$, $d = 86°$, $e = 86°$
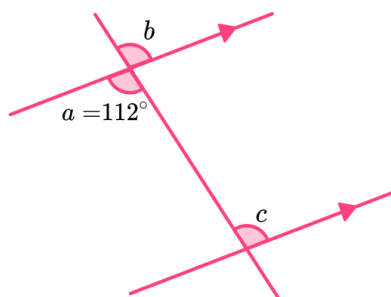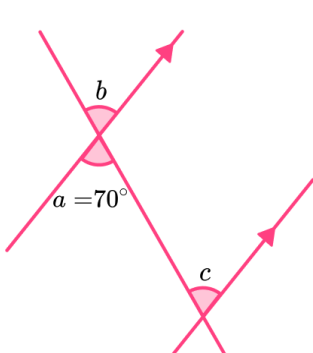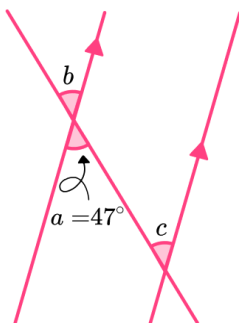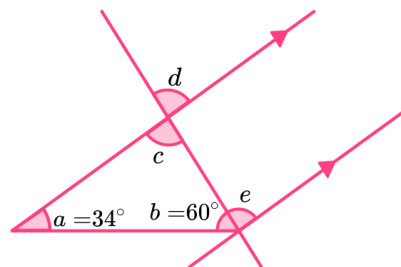
Corresponding Angles - Answers
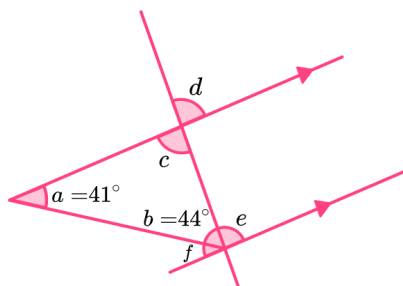
Group B contd	8)	**8)** $c = 95°$, $d = 95°$, $e = 95°$, $f = 41°$
	9)	**9)** $b = 53°$, $d = 80°$, $e = 100°$, $f = 100°$
	10)	**10)** $c = 134°$, $d = 134°$, $e = 134°$, $f = 43°$
	11)	**11)** $b = 41°$, $c = 94°$, $d = 94°$, $e = 86°$, $f = 53°$
	12)	**12)** $c = 80°$, $d = 80°$, $e = 80°$, $f = 38°$
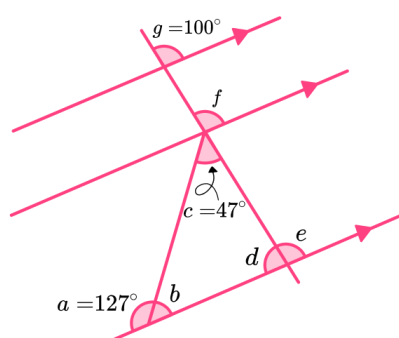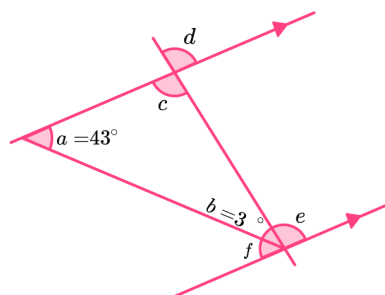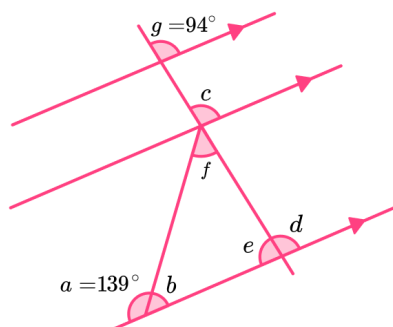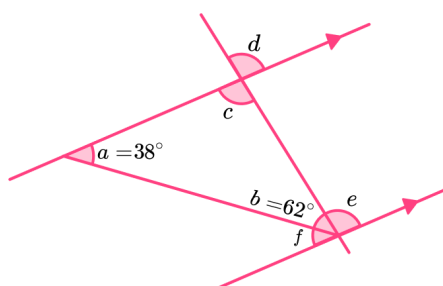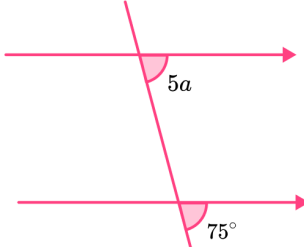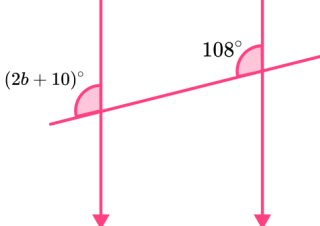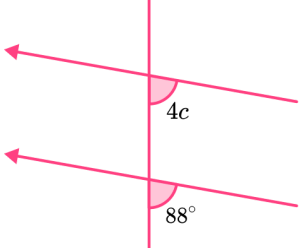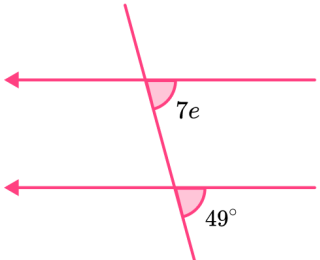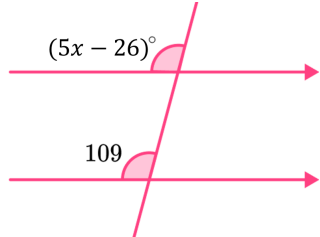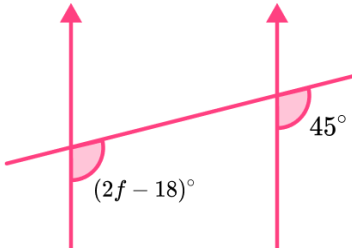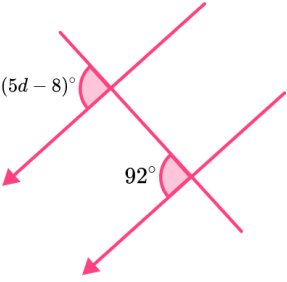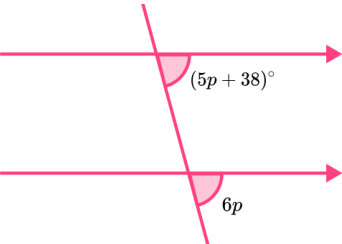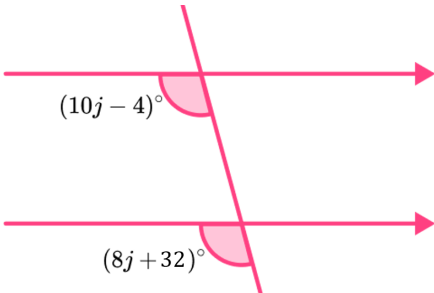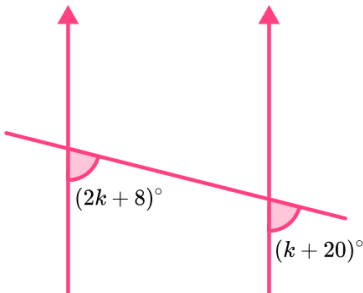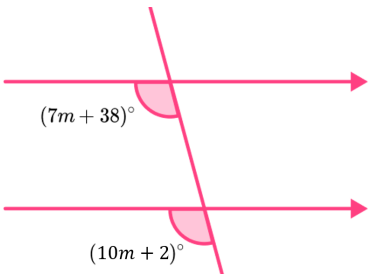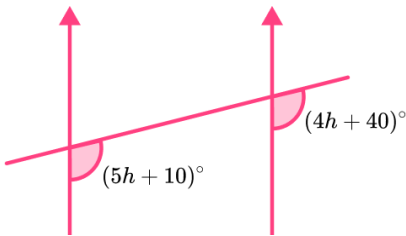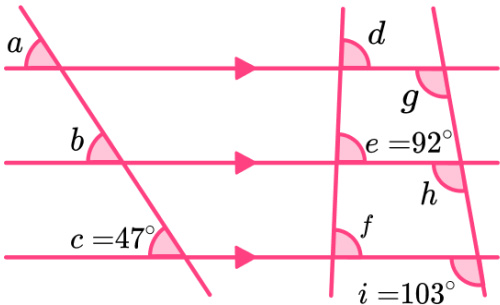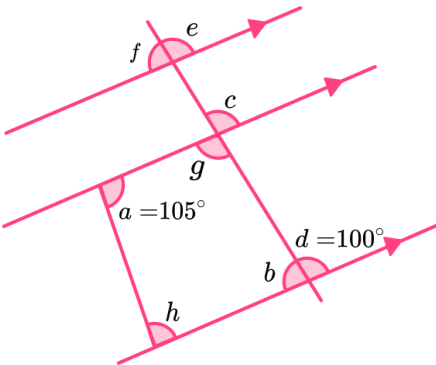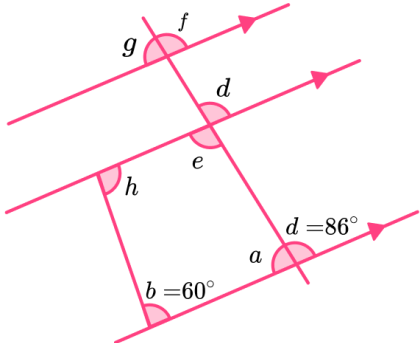
Corresponding Angles - Answers

Group C	Find the unknown variable in each question:	
	1)	**1)** $a = 15$
	2)	**2)** $b = 49$
	3)	**3)** $c = 22$
	4)	**4)** $e = 7$
	5)	**5)** $x = 27$
	6)	**6)** $f = 31.5$

1) $5a$, $75°$

2) $(2b + 10)°$, $108°$

3) $4c$, $88°$

4) $7e$, $49°$

5) $(5x - 26)°$, 109

6) $45°$, $(2f - 18)°$

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Corresponding Angles - Answers

7)

$(5d - 8)°$
$92°$

7) $d = 20$

8)

$(5p + 38)°$
$6p$

8) $p = 38$

9)

$(10j - 4)°$
$(8j + 32)°$

9) $j = 18$

10)

$(2k + 8)°$
$(k + 20)°$

10) $k = 12$

11)

$(7m + 38)°$
$(10m + 2)°$

11) $m = 12$

12)

$(4h + 40)°$
$(5h + 10)°$
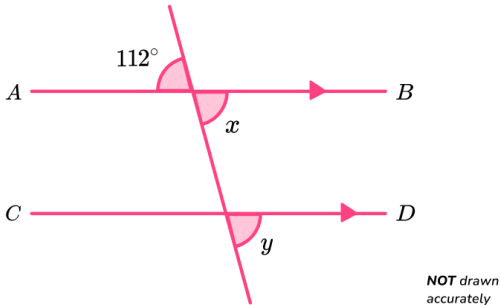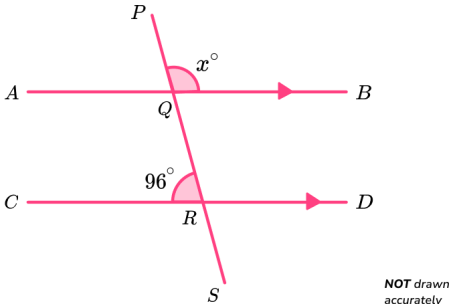
12) $h = 30$
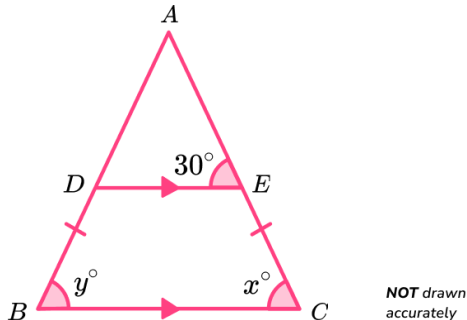
Corresponding Angles - Answers

	Question	Answer
	Applied Questions	
1)	Find the missing angles. 	$a = 47°$ $b = 47°$ $d = 92°$ $f = 92°$ $g = 103°$ $h = 103°$
2)	Find the missing angles. 	$b = 80°$ $c = 100°$ $e = 100°$ $g = 100°$ $h = 75°$
3)	Find the missing angles. 	$a = 94°$ $d = 86°$ $e = 86°$ $f = 86°$ $9 = 94°$ $h = 120°$

THIRD SPACE
LEARNING

Corresponding Angles - Mark Scheme

		Question	**Answer**	
		Exam Questions		
1)	**(a)**	In the diagram below, AB is parallel to line CD Find the value of x. Give a reason for your answer.	**(a)** $x = 112°$ Vertically opposite angles are equal	**(1)** **(1)**
	(b)	Find the value of y. Give a reason for your answer.	**(b)** $y = 112°$ Corresponding angles are equal	**(1)** **(1)**
2)		In the diagram below, AB is parallel to line CD Find the value of x. Give a reason for your answer.	**Alternative Method 1** Angle BQR = 96° Alternate angles are equal $x = 84°$ Angles on a straight line sum to 180° **Alternative Method 2** Angle AQR = 84° Co-interior angles are equal $x = 84°$ Vertically opposite angles are equal **Alternative Method 3** Angle AQP = 96° Corresponding angles are equal $x = 84°$ Angles on a straight line sum to 180°	**(1)** **(1)** **(1)** **(1)** **(1)** **(1)** **(1)** **(1)** **(1)** **(1)** **(1)** **(1)**

Corresponding Angles - Mark Scheme

3)	Shown below is an isosceles triangle.		
	Lines DE and BC are parallel. $AB = AC$		
(a)	Find the value of x. Give a reason for your answer.	$x = 30°$ Corresponding angles are equal	**(1)** **(1)**
(b)	Find the value of y. Give a reason for your answer.	$y = 30°$ Base angles in an isosceles triangle are equal	**(1)** **(1)**

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