

Skill

Group A - Constructing triangles given 3 sides

Construct the following triangles accurately using a pencil, ruler and compass:





Group B - Constructing triangles given 2 sides and an angle, or a side and 2 angles

Construct the following triangles accurately using a pencil, ruler, compass and protractor:





Group C - Constructing triangles

Construct the following triangles accurately using a pencil, ruler and protractor:

1)	ΔABC	2)	ΔPQR	3)	ΔABC
	Length $AB = 10cm$		Length $PQ = 4cm$		Length $AB = 11cm$
	Length $AC = 4cm$		Angle $RPQ = 120^{\circ}$		Length $AC = 9cm$
	Length $BC = 8cm$		Length $PR = 6cm$		Length $BC = 4cm$

4)	ΔXYZ	5)	ΔPQR	6)	ΔABC
	Length $XY = 9cm$		Length $PQ = 3cm$		Length $AB = 6cm$
	Angle $YXZ = 30^{\circ}$		Length $QR = 7cm$		Angle $BAC = 20^{\circ}$
	Length $XZ = 10cm$		Length $PR = 5cm$		Angle $ABC = 140^{\circ}$

7)	ΔXYZ	8)	ΔABC	9)	ΔRST
	Length $XY = 6cm$		Length $AB = 8cm$		Length $RS = 9cm$
	Angle $XYZ = 40^{\circ}$		Angle $BAC = 37^{\circ}$		Angle $RST = 60^{\circ}$
	Angle $YXZ = 50^{\circ}$		Length $AC = 8cm$		Angle $SRT = 60^{\circ}$

10)	ΔDEF	11)	ΔRST	12)	ΔPQR
	Length $DE = 8. cm$		Length $ST = 8cm$		Length $PQ = 5cm$
	Angle $DEF = 20^{\circ}$		Angle $TSR = 35^{\circ}$		Length $QR = 4cm$
	Length $EF = 4.3cm$		Angle $RTS = 60^{\circ}$		Length $PR = 3cm$



Applied

1) *ABC* is a triangle with the following measurements

Length AB = 6cmAngle $BAC = 25^{\circ}$ Angle $ABC = 130^{\circ}$

- (a) Construct the triangle *ABC*.
- (b) What type of triangle is *ABC*?
- 2) Why is it impossible to draw this triangle?



3) *XYZ* is a triangle with the following measurements

Length XY = 7cmAngle $XYZ = 30^{\circ}$ Angle $YXZ = 60^{\circ}$

- (a) Construct the triangle *XYZ*.
- (b) What is the size of angle Z?
- (C) What type of triangle is *XYZ*?



4) *RST* is a triangle with the following measurements

Length RS = 8cmAngle $RST = 60^{\circ}$ Angle $SRT = 60^{\circ}$

- (a) Construct the triangle *RST*.
- (b) Whats is the size of angle T?
- (C) What type of triangle is *RST*?
- (d) How long are the other sides of the triangle (without measuring them).







Make an accurate drawing of the triangle. You must show all your construction lines.

(3 marks)



2) Shown below is a triangle that is not drawn accurately.



Make an accurate drawing of the triangle. You must show all your construction lines.

(3 marks)



3) Shown below is triangle *ABC*.



(a) Make an accurate drawing of *ABC*.You must show all your construction lines.

(3)

(b) Measure the actual length of *AC*.

(1) (4 marks)



4) Use a ruler and compasses to construct an equilateral triangle with sides of length 7centimetres.

You must show all your construction lines.

(3 marks)





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























Group C contd	7)	ΔXYZ Length $XY = 6cm$ Angle $XYZ = 40^{\circ}$ Angle $YXZ = 50^{\circ}$	7)	X 50° 40° Y $6cm$ Y
	8)	ΔABC Length $AB = 8cm$ Angle $BAC = 37^{\circ}$ Length $AC = 8cm$	8)	$A \xrightarrow{37^{\circ}} B \\ 8cm \\ 8cm \\ B$
	9)	ΔRST Length $RS = 9cm$ Angle $RST = 60^{\circ}$ Angle $SRT = 60^{\circ}$	9)	60° 60° 9cm
	10)	ΔDEF Length $DE = 8. cm$ Angle $DEF = 20^{\circ}$ Length $EF = 4. 3cm$	10)	F 4.3cm D 20° E 8cm
	11)	ΔRST Length $ST = 8cm$ Angle $TSR = 35^{\circ}$ Angle $RTS = 60^{\circ}$	11)	S 35° 60° T $8cm$ T
	12)	ΔPQR Length $PQ = 5cm$ Length $QR = 4cm$ Length $PR = 3cm$	12)	R $4cm$ Q $5cm$ Q

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



	Question	Answer		
	Applied Questions			
1)	<i>ABC</i> is a triangle with the following measurements			
	Length $AB = 6cm$ Angle $A = 25^{\circ}$ Angle $B = 130^{\circ}$			
	a) Construct the triangle <i>ABC</i> .	a)		
		$A \frac{25^{\circ}}{6cm} B$		
	b) What type of triangle is <i>ABC</i> ?	b) Scalene		
2)	Why is it impossible to draw this triangle?	The side which is $5cm$ is too short. It can not reach the side adjacent to the 30 degree angle.		
3)	 XYZ is a triangle with the following measurements Length XY = 7cm Angle XYZ = 30° Angle YXZ = 60° a) Construct the triangle XYZ. 	a) Z		
	b) What is the size of angle <i>Z</i> ?	b) 90°		
	c) What type of triangle is <i>XYZ</i> ?	c) Right angled (scalene) triangle		

 $[\]ensuremath{\mathbb{C}}$ Third Space Learning 2021. You may photocopy this page.











