



Rosary School \ Marj Elhamam

Name : _____

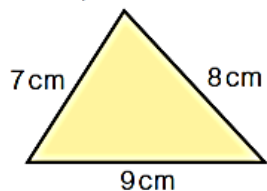
Date : / 10 / 2025

Subject: **Worksheet (2) / Constructions**

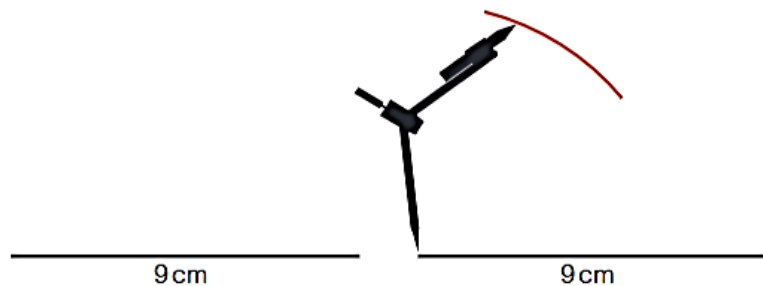
Grade : 8 ()

Constructing triangles

Follow these instructions to accurately construct a triangle with sides 7 cm, 8 cm and 9 cm.

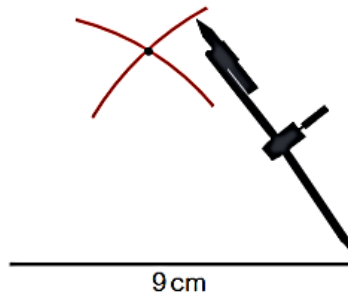


a Use a ruler to draw the 9 cm side accurately.

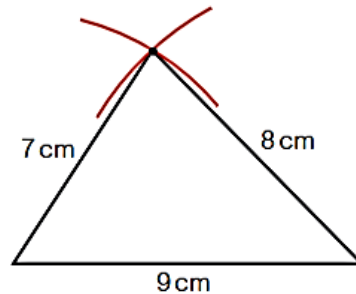


b The 7 cm side starts at the left-hand end of this line. Open your compasses to exactly 7 cm and draw an arc from the left-hand end of the line.

c Open your compasses to exactly 8 cm and draw an arc from the other end.



d Use the point where the arcs cross to create the finished triangle.



Q3 page 75

Construct each triangle ABC.

- a $AB = 9\text{ cm}$, $BC = 6\text{ cm}$ and $CA = 6\text{ cm}$
- b $AB = 7\text{ cm}$, $BC = 3\text{ cm}$ and $CA = 8.5\text{ cm}$

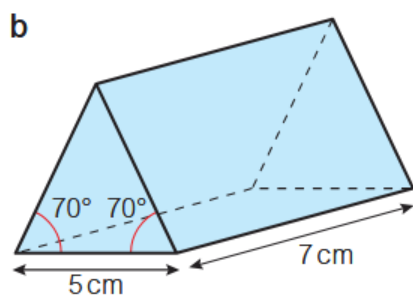
Q3 Strategy hint



Sketch the triangles first.
Remember not to rub out your construction marks.

Q2 page 74 (part b)

Use a ruler and protractor to accurately draw a net of each triangular prism.



Q2 Strategy hint

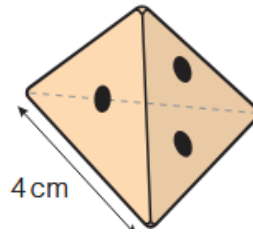


Sketch the net first. Write all the lengths you know on your sketch. Mark the right angles.

Q6 page 76

Each face of a four-sided dice is an equilateral triangle.

Use a ruler and compasses to construct a net of the dice.

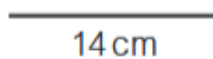


Constructing a perpendicular bisector

Draw a line 14 cm long.

Follow these instructions to construct the perpendicular bisector of this line.

- a** Draw the line.
Open your compasses to more than half the length of the line.



- b** Draw the first arc.



- c** Draw the second arc.



- d** Draw the perpendicular bisector.



Q4 page78

- a Draw a straight line AB 8 cm long.
Construct its perpendicular bisector.
- b Use a ruler and protractor to check that it bisects your line at a right angle.
- c Mark any point P on your perpendicular bisector.
Measure its distance from A and from B.

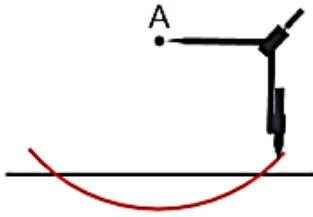
Q5 page78

In triangle ABC, $AB = 5\text{ cm}$, $AC = 7\text{ cm}$ and $BC = 7\text{ cm}$.

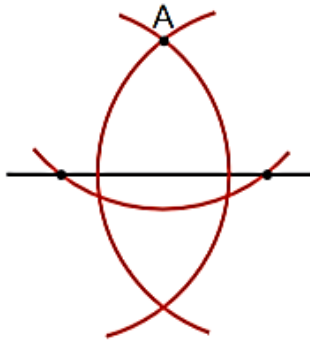
- a Use a ruler and compasses to construct the triangle.
- b What kind of triangle is ABC?
- c Construct the perpendicular bisector of AB.
- d Describe the shapes you have made.

Constructing a perpendicular line from a point

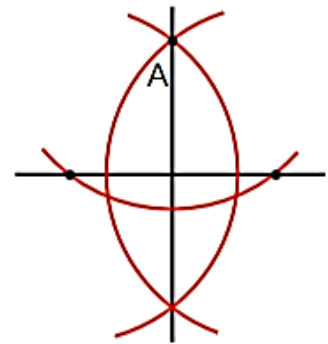
a Draw an arc from point A that intersects the line twice.



b Keep your compasses open the same distance. Draw an arc from each of the two points where the first arc crosses the line.



c Join the points where these two arcs intersect.



Q7 page83

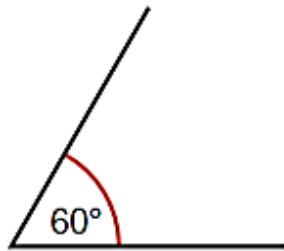
Use a ruler and compasses to construct a line perpendicular to line XY that passes through the point P.

• P

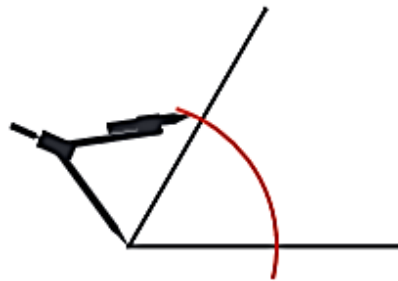
X ————— Y

Constructing a bisector of an angle

a Draw the angle.



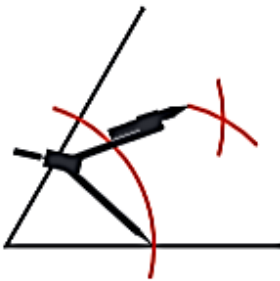
b Draw an arc from the vertex of the angle.



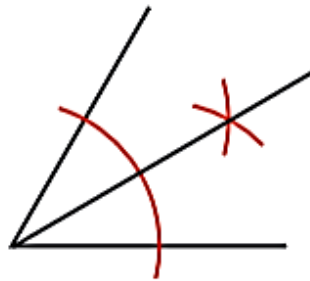
c Draw another arc between the two sides of the angle.



d Draw a second arc.



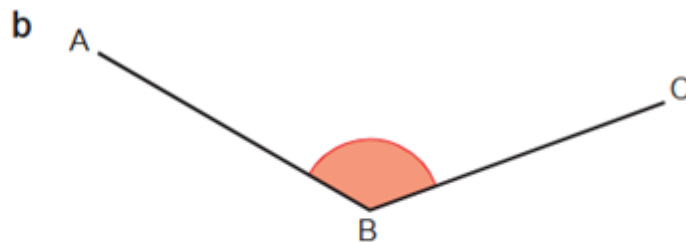
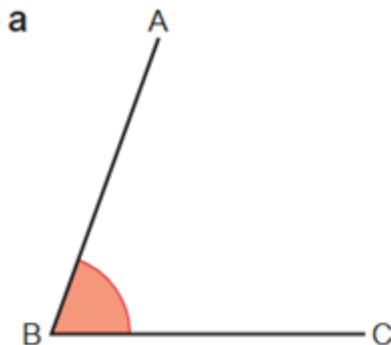
e Draw the angle bisector.



Q4 page81

For each angle

- bisect the angle using a ruler and compasses
- check your two smaller angles using a protractor.



Q4 page82

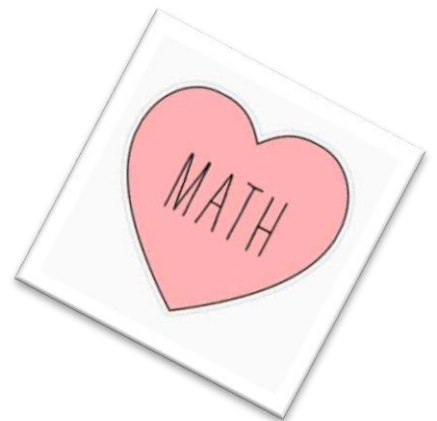
- a) Draw an angle of 120° using a protractor.
- b) Construct the angle bisector.

Q4 page 75

Draw an equilateral triangle with sides 7.5cm.

Check the angles using a protractor. What should they measure?

Teacher : Sally Serkisian





Rosary School \ Marj Elhamam

Name : _____

Date : / 11 / 2025

Subject: **Worksheet (3)** Constructions

Grade : 8 ()

1. Constructing Triangles

Construct a triangle **ABC** where $AB = 3$ cm, $BC = 4$ cm, and $CA = 5$ cm.

2. Constructing a perpendicular bisector

Draw a line **AB = 8 cm**.

Use your compass and ruler to divide the line into **4 equal parts**.

Label all division points.

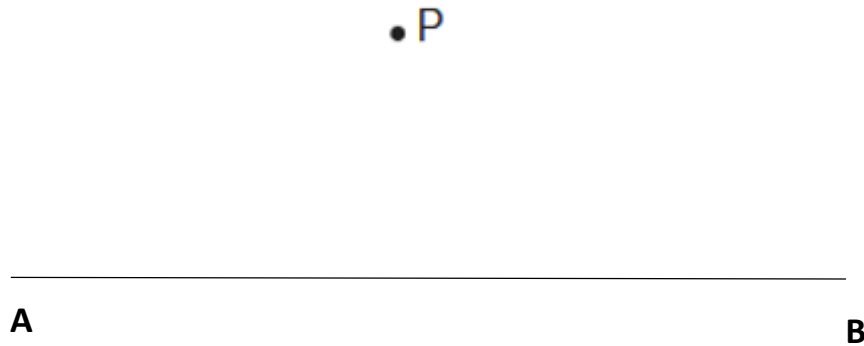
3. Drawing a Perpendicular line from a Point on a Line

Construct a perpendicular line from point C using a compass and ruler.
Label the perpendicular line as CD.



4. Constructing a perpendicular line from a point.

Use a ruler and compasses to construct a line perpendicular to line AB that passes through the point P



Teacher : Sally Serkisian



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Date: / 10 / 2025

Subject: Practice worksheet (1)

Grade: 8 ()

Expanding

Expand and simplify.

(a) $(x - 3)(4x - 1)$

(b) $(5z + 12)(5z - 2)$

(c) $(5y + 6)(y - 5)$

(d) $(5r + p)(r + p)$

(e) $(2t - 10)(t + 8)$

(f) $(3a + 2)(a - 1)$

(g) $(4x - 1)(4x - 1)$

(h) $(5z + 2)(5z - 2)$

(i) $(y + 5)(y - 5)$

(j) $(r + 5)(r + 5)$

(k) $(s - p)(s + p)$

(l) $(3b + 5)(b - 5)$

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Name : _____

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Subject: Practice worksheet (2)

Grade: 8 ()

Factorising

Factorise

1. $x^2 - 4x - 45$

4. $x^2 - 36$

2. $x^2 - 5x - 6$

5. $x^2 + 7x - 8$

3. $x^2 - 17 + 72$

6. $x^2 - 3x - 54$

$$7. x^2 + 3x + 2$$

$$11. x^2 - 9x + 8$$

$$8. x^2 + 3x - 18$$

$$12. x^2 + x - 42$$

$$9. x^2 + 17x + 72$$

$$13. x^2 - x - 72$$

$$10. x^2 + 10x + 24$$

$$14. x^2 + 2x - 63$$

Teacher: Sally Serkisian





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Subject: Practice worksheet (3)

Grade: 8 ()

Solving quadratic equations

➤ Solve each quadratic equation by factorising.

a) $x^2 - 4x = 0$

b) $x^2 - 6 = 30$

c) $x^2 - 16 = 0$

d) $x^2 - 7x + 12 = 0$

e) $x^2 - 15x + 44 = 0$

f) $x^2 - 3x - 18 = 0$

g) $x^2 - 6x = 27$

h) $x^2 + 3x = 10$

i) $x^2 - x = 12$

j) $x^2 - 6x = 16$

k) $x^2 + 9x = -20$

l) $x^2 + 12x = -36$