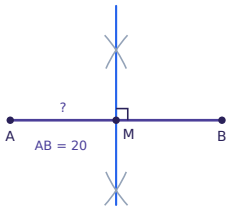
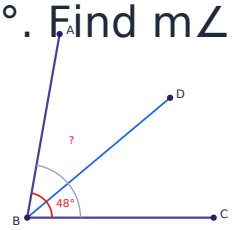
Constructions: Bisectors, Copies & Inscribed Polygons · 1

The perpendicular bisector of AB meets AB at M. AB = 20. Find AM.



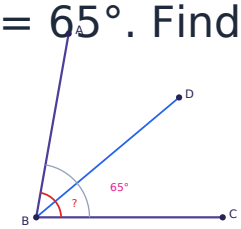
Constructions: Bisectors, Copies & Inscribed Polygons · 2

BD bisects ∠ABC, and m∠ABC = 48°. Find m∠ABD.



Constructions: Bisectors, Copies & Inscribed Polygons · 3

BD bisects ∠ABC, and m∠DBC = 65°. Find m∠ABC.

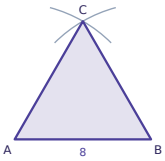


Constructions: Bisectors, Copies & Inscribed Polygons · 4

∠DEF is constructed as a copy of ∠ABC, and m∠ABC = 76°. Find m∠DEF.

Constructions: Bisectors, Copies & Inscribed Polygons · 5

An equilateral triangle ABC is constructed on AB = 8 with a compass. Find m∠CAB.

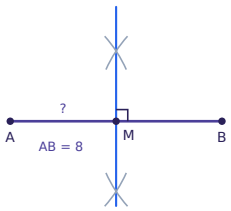


Constructions: Bisectors, Copies & Inscribed Polygons · 6

Which construction do these steps make? Put the compass point on the vertex B and draw an arc that crosses both sides of the angle. From each crossing point, draw an arc inside the angle with the same width. Draw a ray from B through the point where these two arcs cross. A) a copy of a segment B) an equilateral triangle C) a copy of an angle D) the bisector of an angle

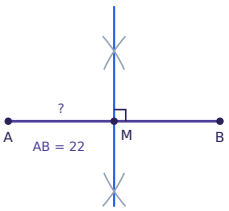
Constructions: Bisectors, Copies & Inscribed Polygons · 7

The perpendicular bisector of AB meets AB at M. AB = 8. Find AM.



Constructions: Bisectors, Copies & Inscribed Polygons · 8

The perpendicular bisector of AB meets AB at M. AB = 22. Find AM.



Constructions: Bisectors, Copies & Inscribed Polygons · 2

ANSWER

24

Constructions: Bisectors, Copies & Inscribed Polygons · 1

ANSWER

10

Constructions: Bisectors, Copies & Inscribed Polygons · 4

ANSWER

76

Constructions: Bisectors, Copies & Inscribed Polygons · 3

ANSWER

130

Constructions: Bisectors, Copies & Inscribed Polygons · 6

ANSWER

D

Constructions: Bisectors, Copies & Inscribed Polygons · 5

ANSWER

60

Constructions: Bisectors, Copies & Inscribed Polygons · 8

ANSWER

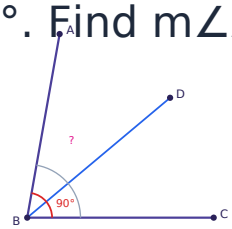
11

Constructions: Bisectors, Copies & Inscribed Polygons · 7

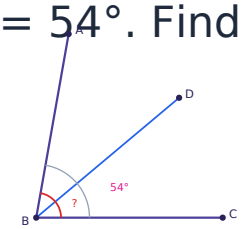
ANSWER

4

BD bisects ∠ABC, and m∠ABC = 90°. Find m∠ABD.

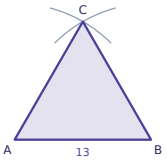


BD bisects ∠ABC, and m∠DBC = 54°. Find m∠ABC.

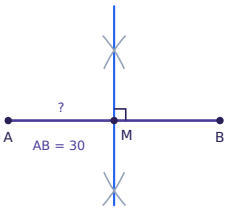


∠DEF is constructed as a copy of ∠ABC, and m∠ABC = 108°. Find m∠DEF.

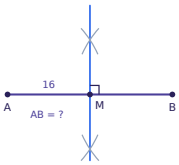
An equilateral triangle ABC is constructed on AB = 13 with a compass. Find m∠CAB.



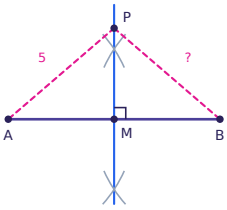
The perpendicular bisector of AB meets AB at M. AB = 30. Find AM.



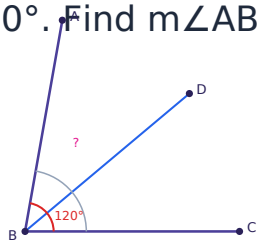
Line ℓ is the perpendicular bisector of AB and meets it at M. AM = 16. Find AB.



P is on the perpendicular bisector of AB. PA = 5. Find PB.



BD bisects ∠ABC, and m∠ABC = 120°. Find m∠ABD.



Constructions: Bisectors, Copies & Inscribed Polygons · 10

ANSWER

108

Constructions: Bisectors, Copies & Inscribed Polygons · 9

ANSWER

45

Constructions: Bisectors, Copies & Inscribed Polygons · 12

ANSWER

60

Constructions: Bisectors, Copies & Inscribed Polygons · 11

ANSWER

108

Constructions: Bisectors, Copies & Inscribed Polygons · 14

ANSWER

32

Constructions: Bisectors, Copies & Inscribed Polygons · 13

ANSWER

15

Constructions: Bisectors, Copies & Inscribed Polygons · 16

ANSWER

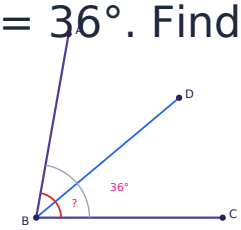
60

Constructions: Bisectors, Copies & Inscribed Polygons · 15

ANSWER

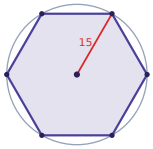
5

BD bisects ∠ABC, and m∠DBC = 36°. Find m∠ABC.



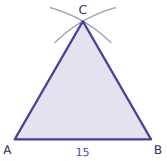
Which construction do these steps make? Set the compass to the length of AB. Draw an arc with the point on A, then an arc with the point on B, using the same width. Connect A and B to the point where the two arcs cross. A) an equilateral triangle B) the perpendicular bisector of a segment C) a copy of a segment D) a copy of an angle

A regular hexagon is constructed in a circle of radius 15. Find the measure of each interior angle of the hexagon.

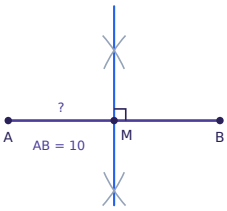


Segment AB is 12 cm long. It is copied 5 times end to end along a ray starting at C, to make segment CD. How long is CD?

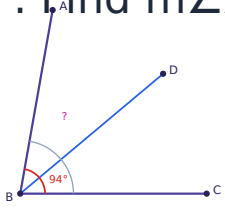
An equilateral triangle ABC is constructed on AB = 15 with a compass. Find m∠CAB.



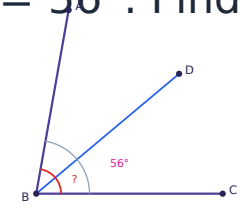
The perpendicular bisector of AB meets AB at M. AB = 10. Find AM.



BD bisects ∠ABC, and m∠ABC = 94°. Find m∠ABD.



BD bisects ∠ABC, and m∠DBC = 56°. Find m∠ABC.



Constructions: Bisectors, Copies & Inscribed Polygons · 18

ANSWER

A

Constructions: Bisectors, Copies & Inscribed Polygons · 17

ANSWER

72

Constructions: Bisectors, Copies & Inscribed Polygons · 20

ANSWER

60

Constructions: Bisectors, Copies & Inscribed Polygons · 19

ANSWER

120

Constructions: Bisectors, Copies & Inscribed Polygons · 22

ANSWER

5

Constructions: Bisectors, Copies & Inscribed Polygons · 21

ANSWER

60

Constructions: Bisectors, Copies & Inscribed Polygons · 24

ANSWER

112

Constructions: Bisectors, Copies & Inscribed Polygons · 23

ANSWER

47