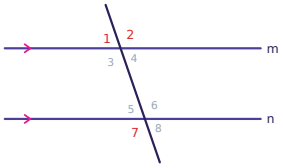
Angle Challenge Problems · 1

Lines m and n are parallel. m∠2 = (13x + 5)° and m∠7 = (8x + 45)°. Find m∠1.

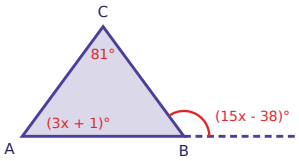


Angle Challenge Problems · 2

Each interior angle of a regular polygon measures 108°. How many sides does it have?

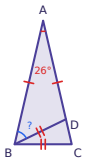
Angle Challenge Problems · 3

The exterior angle at B is (15x - 38)°, ∠A = (3x + 1)° and ∠C = 81°. Find ∠A.



Angle Challenge Problems · 4

In triangle ABC, AB = AC. Point D lies on AC so that BD = BC. If ∠BAC = 26°, find ∠ABD.

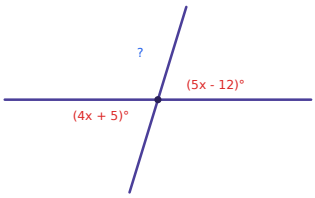


Angle Challenge Problems · 5

The angles of a triangle are in the ratio 1 : 6 : 8. Find the largest angle.

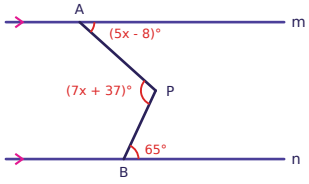
Angle Challenge Problems · 6

Two straight lines cross. Find the angle marked ?.



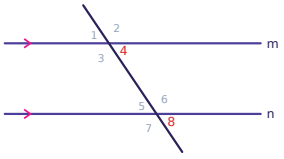
Angle Challenge Problems · 7

Lines m and n are parallel. The angle at A is (5x - 8)°, ∠APB = (7x + 37)° and the angle at B is 65°. Find the measure of ∠APB.



Angle Challenge Problems · 8

Lines m and n are parallel. m∠8 = (2x + 40)° and m∠4 = (4x + 24)°. Find x.



Angle Challenge Problems · 2

ANSWER

5

Angle Challenge Problems · 1

ANSWER

71°

Angle Challenge Problems · 4

ANSWER

51°

Angle Challenge Problems · 3

ANSWER

31°

Angle Challenge Problems · 6

ANSWER

107°

Angle Challenge Problems · 5

ANSWER

96°

Angle Challenge Problems · 8

ANSWER

8

Angle Challenge Problems · 7

ANSWER

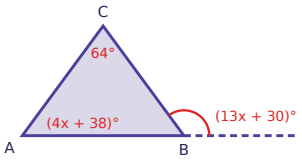
107°

Angle Challenge Problems · 9

Each interior angle of a regular polygon measures 168°. How many sides does it have?

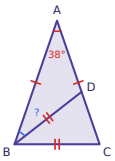
Angle Challenge Problems · 10

The exterior angle at B is (13x + 30)°, ∠A = (4x + 38)° and ∠C = 64°. Find ∠A.



Angle Challenge Problems · 11

In triangle ABC, AB = AC. Point D lies on AC so that BD = BC. If ∠BAC = 38°, find ∠ABD.

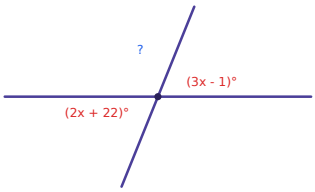


Angle Challenge Problems · 12

The angles of a triangle are in the ratio 5 : 6 : 7. Find the largest angle.

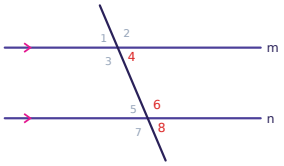
Angle Challenge Problems · 13

Two straight lines cross. Find the angle marked ?.



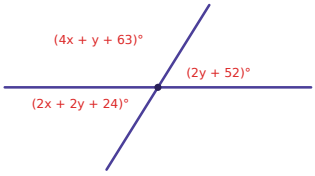
Angle Challenge Problems · 14

Lines m and n are parallel. m∠4 = (5x + 32)° and m∠6 = (5x + 78)°. Find m∠8.



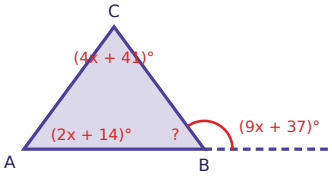
Angle Challenge Problems · 15

Two straight lines cross. Find the value of y.



Angle Challenge Problems · 16

The exterior angle at B is (9x + 37)°, ∠A = (2x + 14)° and ∠C = (4x + 41)°. Find the interior angle at B.



Angle Challenge Problems · 10

ANSWER

70°

Angle Challenge Problems · 9

ANSWER

30

Angle Challenge Problems · 12

ANSWER

70°

Angle Challenge Problems · 11

ANSWER

33°

Angle Challenge Problems · 14

ANSWER

67°

Angle Challenge Problems · 13

ANSWER

112°

Angle Challenge Problems · 16

ANSWER

89°

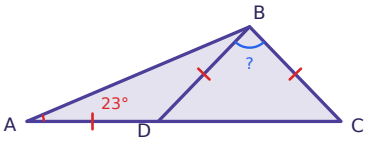
Angle Challenge Problems · 15

ANSWER

3

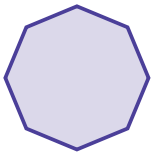
Angle Challenge Problems · 17

In triangle ABC, point D lies on AC so that AD = DB = BC. If ∠BAC = 23°, find ∠DBC.



Angle Challenge Problems · 18

Each interior angle of a regular 8-sided polygon measures (9x + 9)°. Find x.

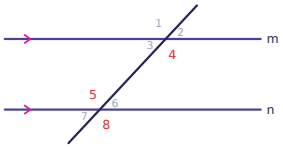


Angle Challenge Problems · 19

The angles of a triangle are in the ratio 5 : 2 : 3. Find the exterior angle at the vertex with the smallest angle.

Angle Challenge Problems · 20

Lines m and n are parallel. m∠5 = (15x + 43)° and m∠4 = (9x + 79)°. Find m∠8.

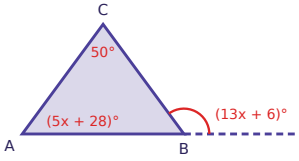


Angle Challenge Problems · 21

Each interior angle of a regular polygon measures 120°. How many sides does it have?

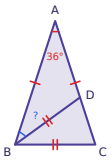
Angle Challenge Problems · 22

The exterior angle at B is (13x + 6)°, ∠A = (5x + 28)° and ∠C = 50°. Find ∠A.



Angle Challenge Problems · 23

In triangle ABC, AB = AC. Point D lies on AC so that BD = BC. If ∠BAC = 36°, find ∠ABD.



Angle Challenge Problems · 24

The angles of a triangle are in the ratio 3 : 8 : 7. Find the largest angle.

Angle Challenge Problems · 18

ANSWER

14

Angle Challenge Problems · 17

ANSWER

88°

Angle Challenge Problems · 20

ANSWER

133°

Angle Challenge Problems · 19

ANSWER

144°

Angle Challenge Problems · 22

ANSWER

73°

Angle Challenge Problems · 21

ANSWER

6

Angle Challenge Problems · 24

ANSWER

80°

Angle Challenge Problems · 23

ANSWER

36°