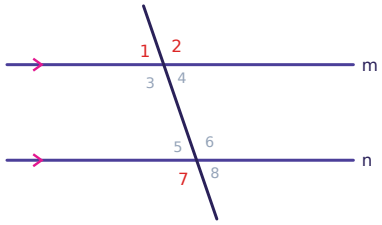
Task card 1 Angle Challenge Problems

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

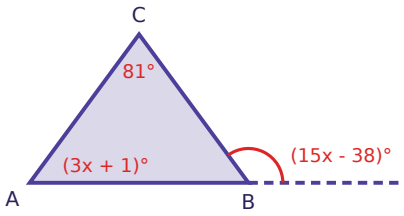


Task card 2 Angle Challenge Problems

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

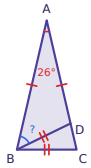
Task card 3 Angle Challenge Problems

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



Task card 4 Angle Challenge Problems

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

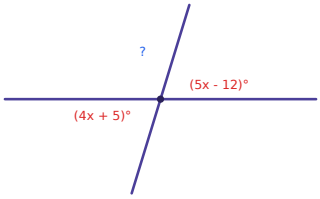


Task card 5 Angle Challenge Problems

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

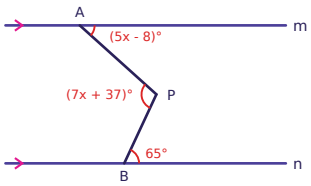
Task card 6 Angle Challenge Problems

Two straight lines cross. Find the angle marked ?.



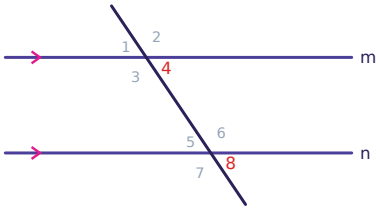
Task card 7 Angle Challenge Problems

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.



Task card 8 Angle Challenge Problems

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

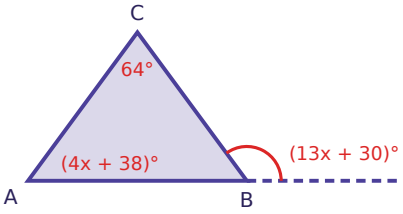


Task card 9 Angle Challenge Problems

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

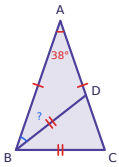
Task card 10 Angle Challenge Problems

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



Task card 11 Angle Challenge Problems

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

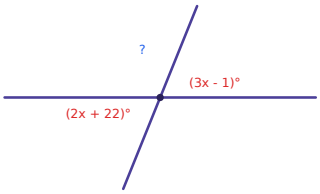


Task card 12 Angle Challenge Problems

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

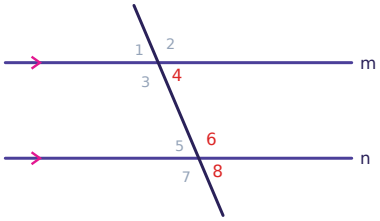
Task card 13 Angle Challenge Problems

Two straight lines cross. Find the angle marked ?.



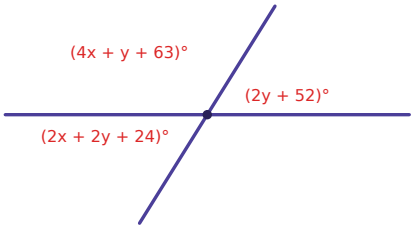
Task card 14 Angle Challenge Problems

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



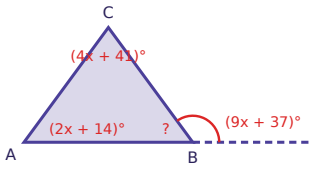
Task card 15 Angle Challenge Problems

Two straight lines cross. Find the value of y.



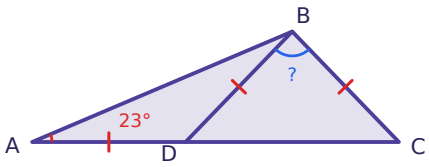
Task card 16 Angle Challenge Problems

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



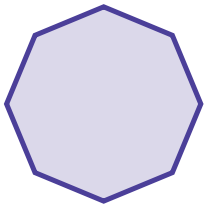
Task card 17 Angle Challenge Problems

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



Task card 18 Angle Challenge Problems

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

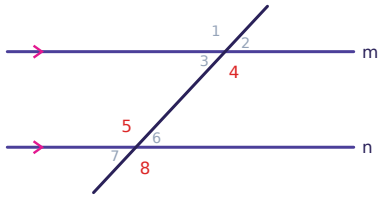


Task card 19 Angle Challenge Problems

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

Task card 20 Angle Challenge Problems

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

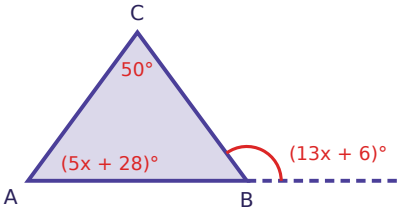


Task card 21 Angle Challenge Problems

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

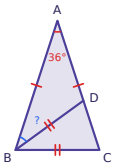
Task card 22 Angle Challenge Problems

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



Task card 23 Angle Challenge Problems

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



Task card 24 Angle Challenge Problems

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

Angle Challenge Problems Task Cards

Recording sheet · Grade 10 · Solve each problem. Lines marked with arrows are parallel and equal tick marks show equal sides. Figures are not drawn to scale.

Name: _____ Date: _____

Scan to check your answers

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

Angle Challenge Problems Task Cards: Answer Key

Grade 10 · Easy

The answers online

1. 71°	**2.** 5	**3.** 31°
4. 51°	**5.** 96°	**6.** 107°
7. 107°	**8.** 8	**9.** 30
10. 70°	**11.** 33°	**12.** 70°
13. 112°	**14.** 67°	**15.** 3
16. 89°	**17.** 88°	**18.** 14
19. 144°	**20.** 133°	**21.** 6
22. 73°	**23.** 36°	**24.** 80°