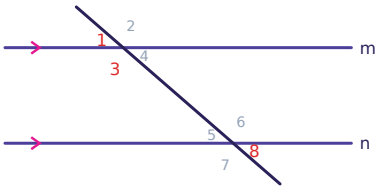
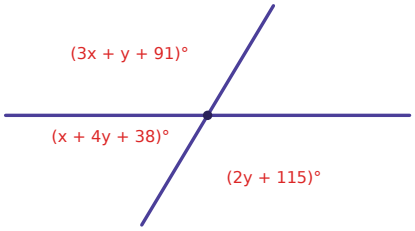
Task card 1 Angle Challenge Problems

Lines m and n are parallel. m∠8 = (2x + 23)° and m∠1 = (6x - 13)°. Find m∠3.



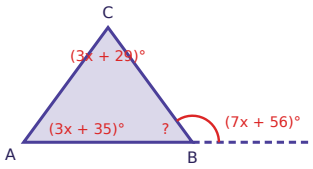
Task card 2 Angle Challenge Problems

Two straight lines cross. Find the value of y.



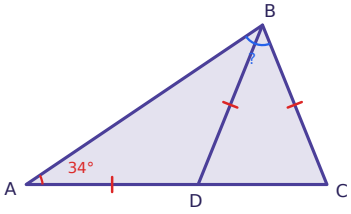
Task card 3 Angle Challenge Problems

The exterior angle at B is (7x + 56)°, ∠A = (3x + 35)° and ∠C = (3x + 29)°. Find the interior angle at B.



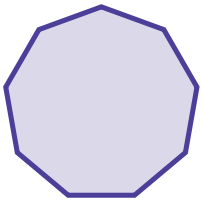
Task card 4 Angle Challenge Problems

In triangle ABC, point D lies on AC so that AD = DB = BC. If ∠BAC = 34°, find ∠ABC.



Task card 5 Angle Challenge Problems

Each interior angle of a regular 9-sided polygon measures (8x + 4)°. Find x.

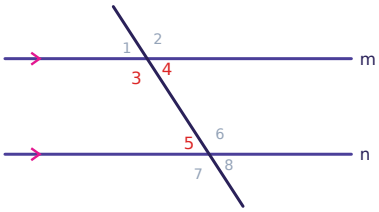


Task card 6 Angle Challenge Problems

The angles of a triangle are in the ratio 5 : 9 : 4. Find the exterior angle at the vertex with the smallest angle.

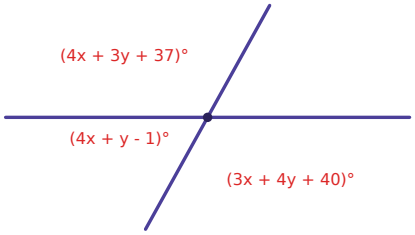
Task card 7 Angle Challenge Problems

Lines m and n are parallel. m∠4 = (6x - 15)° and m∠5 = (2x + 33)°. Find m∠3.



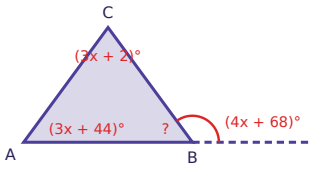
Task card 8 Angle Challenge Problems

Two straight lines cross. Find the value of x.



Task card 9 Angle Challenge Problems

The exterior angle at B is (4x + 68)°, ∠A = (3x + 44)° and ∠C = (3x + 2)°. Find the interior angle at B.



Task card 10 Angle Challenge Problems

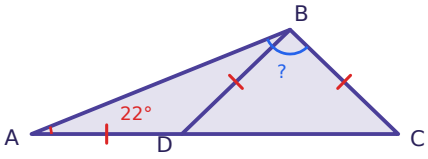
Each interior angle of a regular 24-sided polygon measures (10x + 35)°. Find x.

Task card 11 Angle Challenge Problems

The angles of a triangle are in the ratio 4 : 5 : 1. Find the exterior angle at the vertex with the smallest angle.

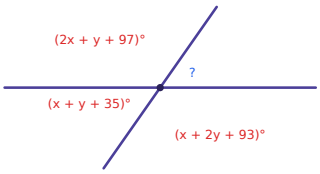
Task card 12 Angle Challenge Problems

In triangle ABC, point D lies on AC so that AD = DB = BC. If ∠BAC = 22°, find ∠ABC.



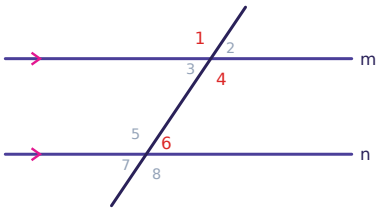
Task card 13 — Angle Challenge Problems

Two straight lines cross. Find x and y, then find the angle marked ?.



Task card 14 — Angle Challenge Problems

Lines m and n are parallel. m∠6 = (6x - 10)° and m∠4 = (9x + 25)°. Find m∠1.

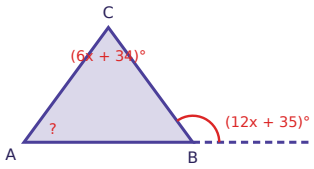


Task card 15 — Angle Challenge Problems

Each interior angle of a regular polygon is 60° more than each exterior angle. How many sides does it have?

Task card 16 — Angle Challenge Problems

In triangle ABC, CA = CB. The exterior angle at B is (12x + 35)° and ∠C = (6x + 34)°. Find ∠A.

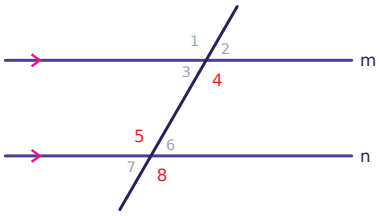


Task card 17 — Angle Challenge Problems

The exterior angles of a triangle (one at each vertex) are in the ratio 3 : 7 : 8. Find the largest interior angle of the triangle.

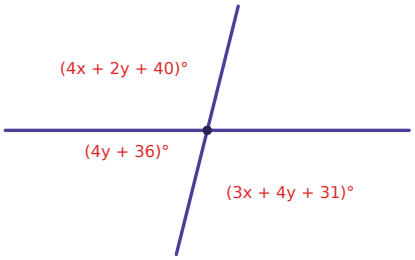
Task card 18 — Angle Challenge Problems

Lines m and n are parallel. m∠4 = (7x + 36)° and m∠8 = (13x - 36)°. Find m∠5.



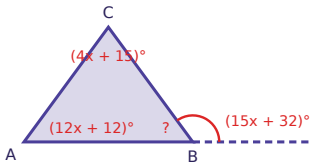
Task card 19 Angle Challenge Problems

Two straight lines cross. Find the value of y.



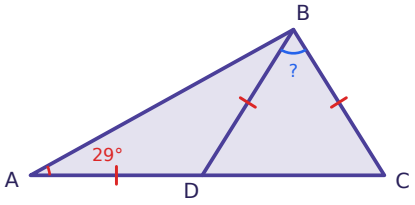
Task card 20 Angle Challenge Problems

The exterior angle at B is (15x + 32)°, ∠A = (12x + 12)° and ∠C = (4x + 15)°. Find the interior angle at B.



Task card 21 Angle Challenge Problems

In triangle ABC, point D lies on AC so that AD = DB = BC. If ∠BAC = 29°, find ∠DBC.



Task card 22 Angle Challenge Problems

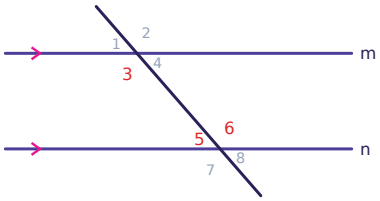
The interior angles of a regular polygon add up to 2880°. Find the measure of each exterior angle.

Task card 23 Angle Challenge Problems

The angles of a triangle are in the ratio 5 : 3 : 4. Find the exterior angle at the vertex with the smallest angle.

Task card 24 Angle Challenge Problems

Lines m and n are parallel. m∠3 = (14x + 61)° and m∠6 = (12x + 71)°. Find m∠5.



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.

Scan to check your answers

Name: _____ Date: _____

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 · Medium

The answers online

1. 139°	**2.** 3	**3.** 68°
4. 78°	**5.** 17	**6.** 140°
7. 123°	**8.** 13	**9.** 68°
10. 13	**11.** 162°	**12.** 114°
13. 55°	**14.** 124°	**15.** 6
16. 49°	**17.** 120°	**18.** 120°
19. 10	**20.** 73°	**21.** 64°
22. 20°	**23.** 135°	**24.** 49°