11.10 Quadrilateral Maze Review

LO: We will learn how to practice proving quadrilaterals with variables and coordinates

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DO NOW:

Write your name on the little piece of paper. Sit down and listen for directions.

LO: We will learn how to practice proving quadrilaterals with variables and coordinates

WILF (What I'm Looking For):

1. The ability to identify the properties specific to each quadrilateral.
2. The ability to know which method to use to solve for each quadrilateral.
3. The ability to prove a quadrilateral using coordinate geometry.

BETAS, instructions, dont print:

Preparation:

- Print each station sheet on a separate piece of paper or cardstock.
- Hang the stations around the classroom.

Instructions:

Assign students partners or groups. Each group will begin at a station. The students will answer the questions and move to the stations that correspond with their answer. For example, group 5 should begin at station 5. If their answer says to go to station 9, that's the station they will visit next. They should follow this procedure until that have visited all of the stations. If a group is sent back to a station they have previously visited, they know they have made a mistake and should go back and check their work.

Helpful Hints:

- I recommend laminating the stations sheets so that they can be reused.
- This could be made into a game where the first group to finish all of the cards wins!

1

DEFG is a rectangle.
$DF = 5x - 5$ and $EG = x + 11$.
Find the value of x and the length of each diagonal.

a)	$x = 5$	$DF = 20$	$EG = 16$	go to station 6
b)	$x = 4$	$DF = 20$	$EG = 20$	go to station 3
c)	$x = 4$	$DF = 15$	$EG = 15$	go to station 5
d)	$x = 29$	$DF = 140$	$EG = 140$	go to station 2
e)	$x = 5$	$DF = 15$	$EG = 20$	go to station 7

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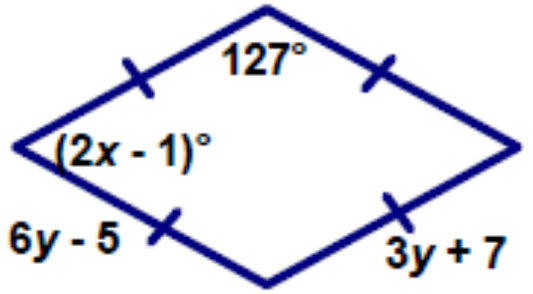
2

Give the most precise name for the quadrilateral. Then, find x and y.



a)	square	$x = 64$	$y = 4$	go to station 3
b)	rhombus	$x = 27$	$y = 4$	go to station 9
c)	square	$x = 27$	$y = 4$	go to station 10
d)	rhombus	$x = 64$	$y = 20$	go to station 12
e)	parallelogram	$x = 27$	$y = 20$	go to station 6

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3

Choose the statement that is *not true* for <u>all</u> parallelograms.

a)	The diagonals are congruent	go to station 2
b)	The diagonals bisect each other	go to station 6
c)	Opposite sides are congruent	go to station 7
d)	Opposite angles are congruent	go to station 11
e)	Opposite sides are parallel	go to station 9

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4

In parallelogram $PQRS$, $m\angle PQR = 70°$ and $PQ = 5$. Find SR and $m\angle QPS$.

a) $SR = 5,\ m\angle QPS = 110°$ go to station 6

b) $SR = 10,\ m\angle QPS = 110°$ go to station 2

c) $SR = 5,\ m\angle QPS = 70°$ go to station 5

d) $SR = 10,\ m\angle QPS = 70°$ go to station 8

e) $SR = 5,\ m\angle QPS = 90°$ go to station 11

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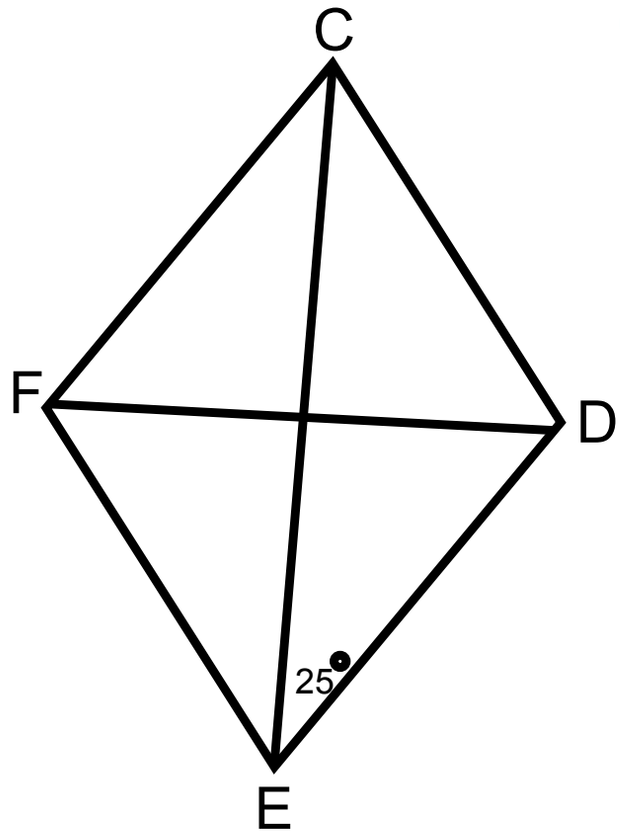
5

In rhombus CDEF, $m\angle DEC$ is 25°.

Find the $m\angle CDE$.



a) 130° go to station 8

b) 80° go to station 7

c) 100° go to station 5

d) 75° go to station 1

e) 140° go to station 10

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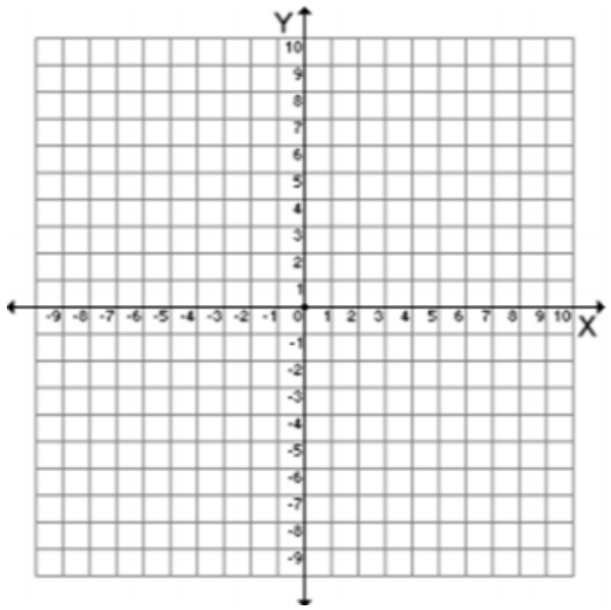
6

What is the most precise name for a quadrilateral with vertices (-1,4), (3,7), (6,3), and (2,0)?



a) Kite — go to station 5

b) Parallelogram — go to station 8

c) Rectangle — go to station 7

d) Rhombus — go to station 12

e) Square — go to station 1

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7 Which statement is true about *all* trapezoids?

a)	One pair opposite sides are parallel	go to station 10
b)	Consecutive angles are supplementary	go to station 9
c)	The base angles are congruent	go to station 2
d)	All angles are congruent	go to station 12
e)	The diagonals are congruent	go to station 4

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8

What is the most precise name for a quadrilateral with vertices (-4, -1), (1, -1), (4, 3), and (-1, 3)?

a)	Kite	go to station 2
b)	Parallelogram	go to station 1
c)	Trapezoid	go to station 5
d)	Rhombus	go to station 7
e)	Square	go to station 10

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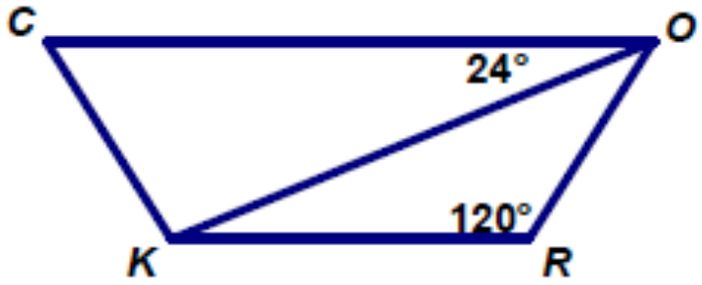
9

Trapezoid *ROCK* is isosceles. Find $m\angle ROK$, $m\angle CKO$, and $m\angle C$.



a) 36°, 96°, 60° go to station 11

b) 30°, 90°, 52° go to station 12

c) 36°, 90°, 60° go to station 5

d) 30°, 96°, 60° go to station 2

e) 36°, 96°, 54° go to station 7

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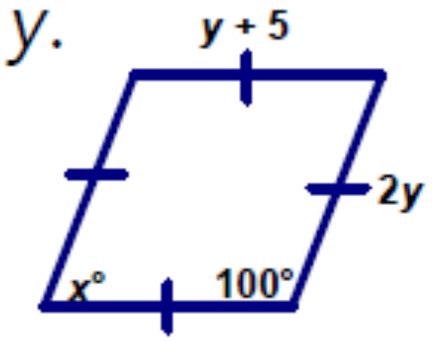
10

Give the most precise name for the quadrilateral. Then, find x and y.



a) square $x = 80$ $y = 5$ go to station 7

b) rhombus $x = 80$ $y = 5$ go to station 12

c) rhombus $x = 100$ $y = 10$ go to station 4

d) square $x = 80$ $y = 10$ go to station 2

e) rectangle $x = 100$ $y = 7$ go to station 3

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11 The diagonals of quadrilaterals *ABCD* intersect at point *N* to produce four congruent segments. What type of quadrilateral is *ABCD*?

a)	Rectangle	go to station 4
b)	Parallelogram	go to station 5
c)	Trapezoid	go to station 7
d)	Rhombus	go to station 2
e)	Square	go to station 1

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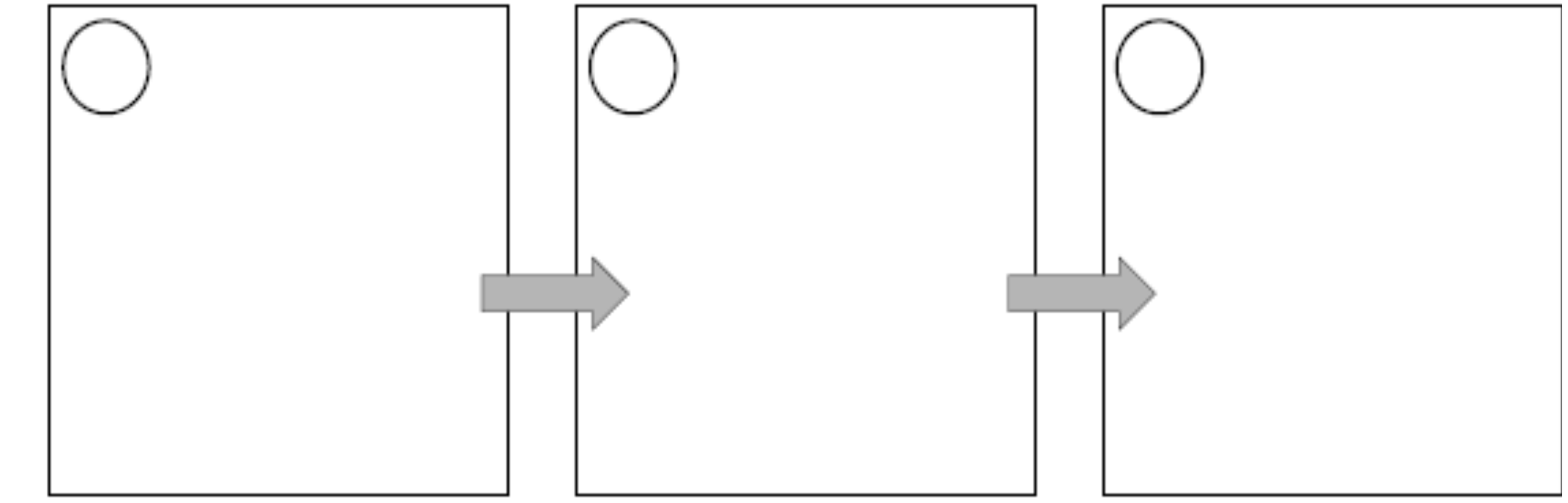
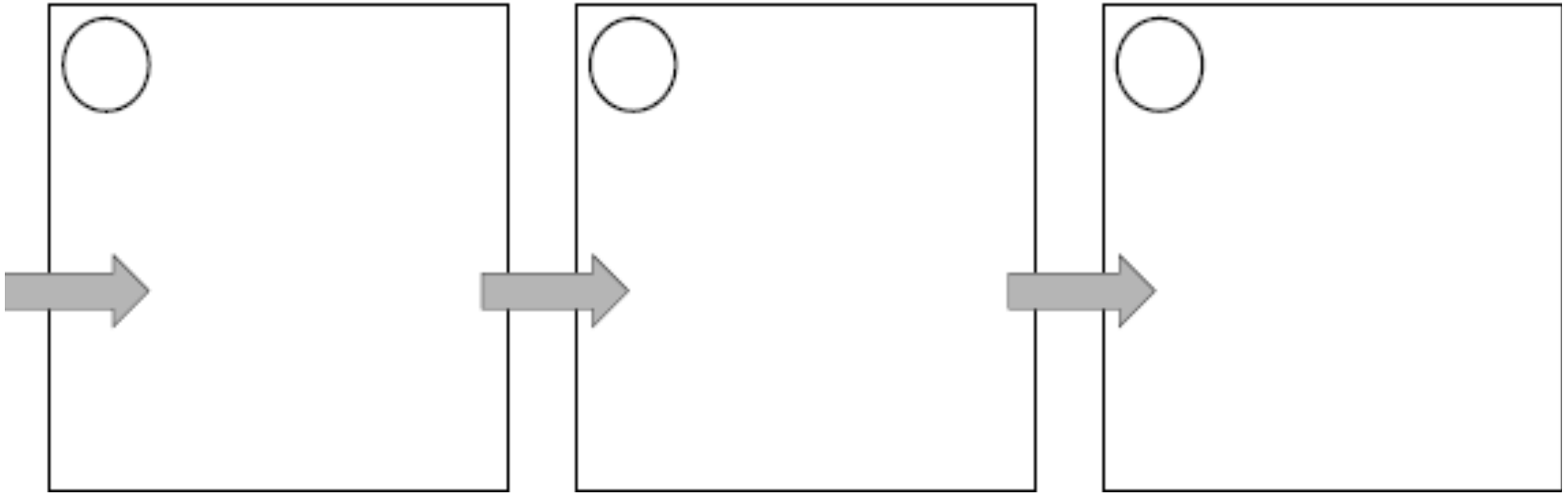
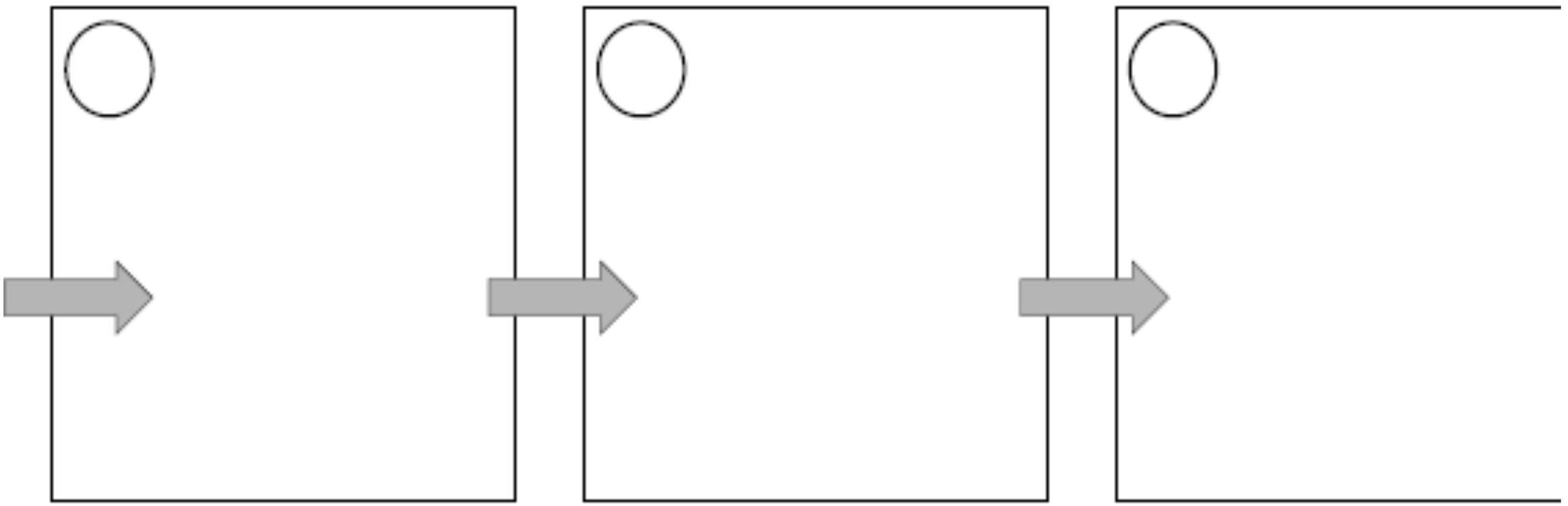
12

The measure of one interior angle of a parallelogram is 50 degrees more than 4 times the measure of another angle. Find the measure of each angle.

a)	26°, 170°	go to station 9
b)	36°, 154°	go to station 10
c)	28°, 152°	go to station 2
d)	56°, 124°	go to station 7
e)	26°, 154°	go to station 3

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