

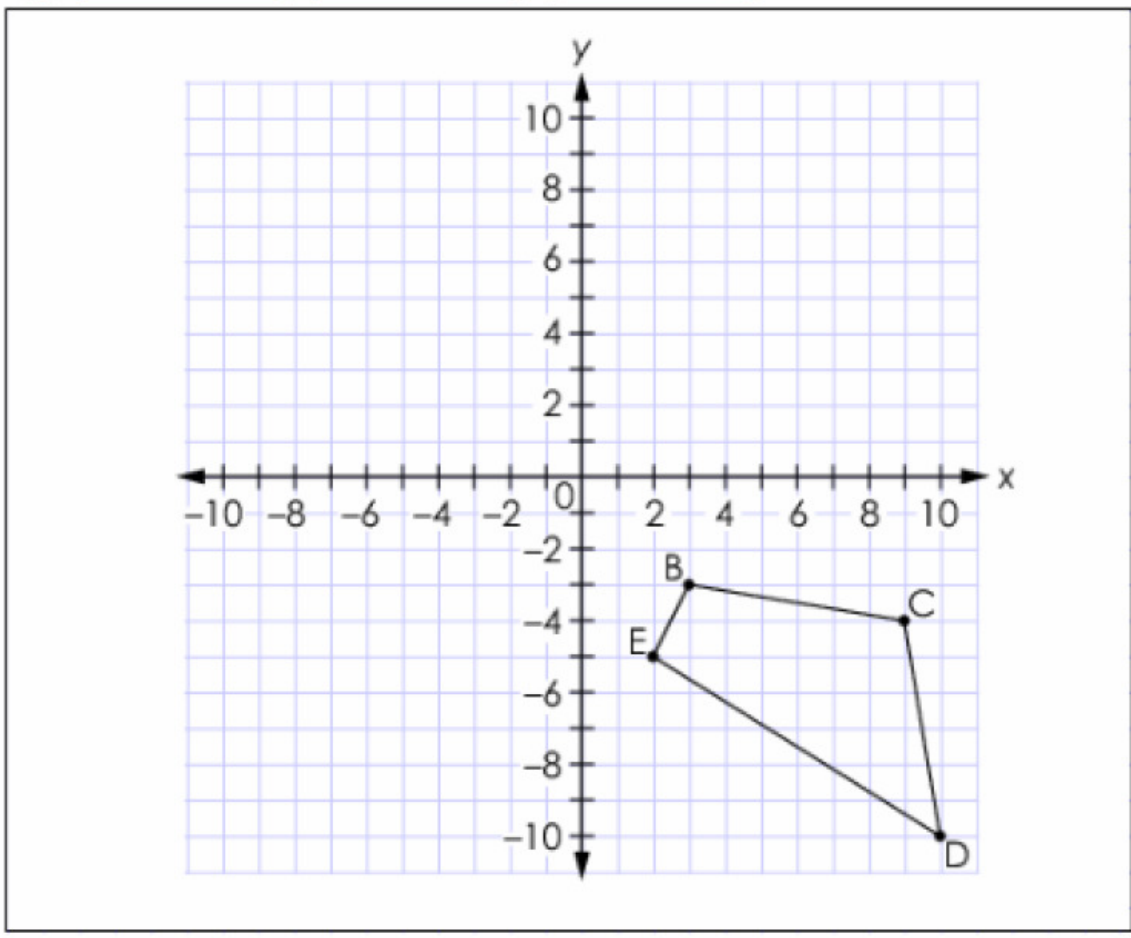
Name.....Period.....
Geometry
Weekly Homework 01242020

Question 1.

Quadrilateral BCDE is shown on the coordinate grid.

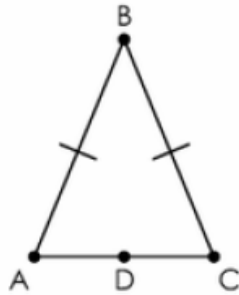
Keisha reflects the figure across the line $y = x$ to create B'C'D'E'.

Use the Connect Line tool to draw quadrilateral B'C'D'E'.



Question 2.

Triangle ABC is shown.



Given: Triangle ABC is isosceles. Point D is the midpoint of \overline{AC} .

Prove: $\angle BAC \cong \angle BCA$

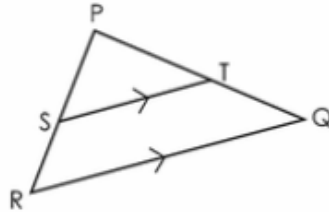
Place reasons in the table to complete the proof.

Statements	Reasons
1. Triangle ABC is isosceles. D is the midpoint of \overline{AC} .	1. Given
2. $\overline{AD} \cong \overline{DC}$	2. Definition of midpoint
3. $\overline{BA} \cong \overline{BC}$	3. Definition of isosceles triangle
4. \overline{BD} exists.	4. A single line segment can be drawn between any two points.
5. $\overline{BD} \cong \overline{BD}$	5.
6. $\triangle ABD \cong \triangle CBD$	6.
7. $\angle BAC \cong \angle BCA$	7.

AA congruency postulate	Reflexive property
SAS congruency postulate	Symmetric property
SSS congruency postulate	Midpoint theorem
Corresponding parts of congruent triangles are congruent.	

Question 3.

Triangle PQR is shown, where \overline{ST} is parallel to \overline{RQ} .



Marta wants to prove that $\frac{SR}{PS} = \frac{TQ}{PT}$.

Place a statement or reason in each blank box to complete Marta's proof.

Statements	Reasons
1. $\overline{ST} \parallel \overline{RQ}$	1. Given
2. $\angle PST \cong \angle R$ and $\angle PTS \cong \angle Q$	2. If two parallel lines are cut by a transversal, then corresponding angles are congruent.
3. $\triangle PQR \sim \triangle PTS$	3.
4.	4.
5. $PR = PS + SR$, $PQ = PT + TQ$	5. Segment addition postulate
6. $\frac{PS + SR}{PS} = \frac{PT + TQ}{PT}$	6. Substitution
7. $\frac{PS}{PS} + \frac{SR}{PS} = \frac{PT}{PT} + \frac{TQ}{PT}$	7. Commutative property of addition
8. $\frac{SR}{PS} = \frac{TQ}{PT}$	8. Subtraction property of equality

$\frac{PR}{PS} = \frac{PQ}{PT}$	$\frac{PS}{SR} = \frac{PT}{ST}$	$\angle P \cong \angle P$
AA Similarity	ASA Similarity	SSS Similarity
Reflexive property	Segment addition postulate	Corresponding sides of similar triangles are proportional.
Corresponding sides of similar triangles are congruent.	If two parallel lines are cut by a transversal, then alternate interior angles are congruent.	If two parallel lines are cut by a transversal, then alternate exterior angles are congruent.

Question 4.

37 On the set of axes below, solve the following system of equations graphically and state the coordinates of *all* points in the solution.

$$(x + 3)^2 + (y - 2)^2 = 25$$

$$2y + 4 = -x$$

