

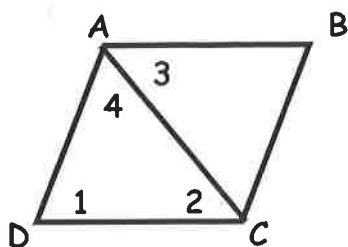
Determine if the following statements are true or false.

- True 1) Every square is a rhombus.
- True 2) Every rhombus is a parallelogram.
- True 3) The opposite sides of any rhombus are parallel and congruent.
- True 4) The opposite angles of any rhombus are congruent.
- True 5) The consecutive angles of any rhombus are supplementary.
- False 6) Every rhombus is a square.
- False 7) Every parallelogram is a rhombus..
- True 8) The diagonals of a rectangle must be congruent.
- True 9) The diagonals of a rectangle must bisect each other.
- False 10) The diagonals of a rectangle must be perpendicular.
- True 11) The diagonals of a square must bisect each other.
- True 12) The diagonals of a square must be congruent.
- False 13) If the diagonals of a parallelogram are congruent, then it must be a square.
- True 14) The diagonals of a square must be perpendicular.
- True 15) The diagonals of a square bisect the opposite angles.

Circle the quadrilaterals that have each property.

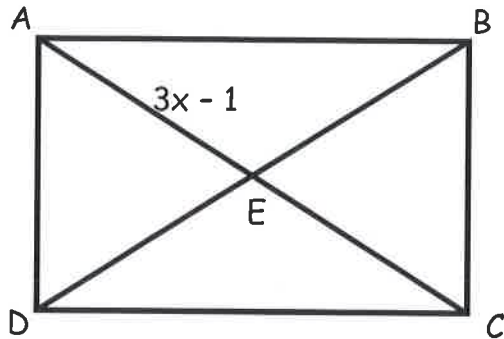
- | | | | | |
|---|----------------------|------------------|----------------|---------------|
| 1) All angles are congruent. | Parallelogram | <u>Rectangle</u> | Rhombus | <u>Square</u> |
| 2) The diagonals are congruent. | Parallelogram | <u>Rectangle</u> | Rhombus | <u>Square</u> |
| 3) The diagonals are perpendicular. | Parallelogram | Rectangle | <u>Rhombus</u> | <u>Square</u> |
| 4) The diagonals bisect each other. | <u>Parallelogram</u> | <u>Rectangle</u> | <u>Rhombus</u> | <u>Square</u> |
| 5) The diagonals are perpendicular bisectors of each other. | Parallelogram | Rectangle | <u>Rhombus</u> | <u>Square</u> |
| 6) Consecutive angles are supplementary. | <u>Parallelogram</u> | <u>Rectangle</u> | <u>Rhombus</u> | <u>Square</u> |
| 7) Each diagonal bisects opposite angles. | Parallelogram | Rectangle | <u>Rhombus</u> | <u>Square</u> |

1) Rhombus [$m\angle B = 54^\circ$]



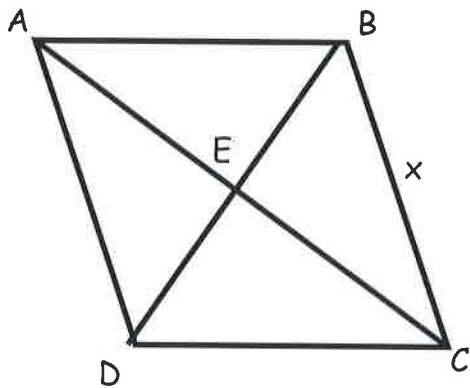
$m\angle 1 =$	<u>54°</u>
$m\angle 2 =$	<u>63°</u>
$m\angle 3 =$	<u>63°</u>
$m\angle 4 =$	<u>63°</u>

2) Rectangle [ED = 5x - 15].



AE = <u>20</u>	BE = <u>20</u>
EC = <u>20</u>	ED = <u>20</u>
AC = <u>40</u>	BD = <u>40</u>

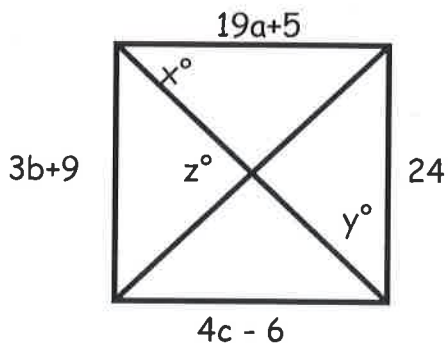
3) Rhombus [BD = 10 and AC = 20].



I don't expect you to know how to get this

x = <u>$\sqrt{125}$</u>
BE = <u>5</u>
EC = <u>10</u>

4) Square



$$19a + 5 = 24$$

$$3b + 9 = 24$$

$$4c - 6 = 24$$

x = <u>45°</u>
y = <u>45°</u>
z = <u>90°</u>
a = <u>1</u>
b = <u>5</u>
c = <u>7.5</u>