

Warm Up

Given: BCDF is a kite

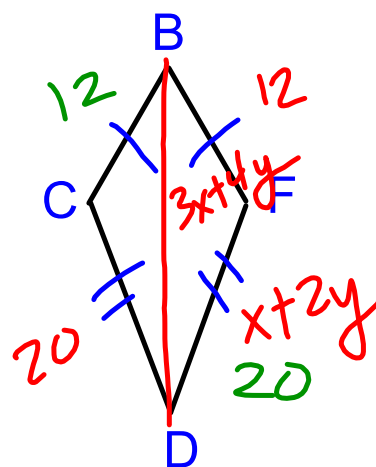
$$BD = 3x + 4y$$

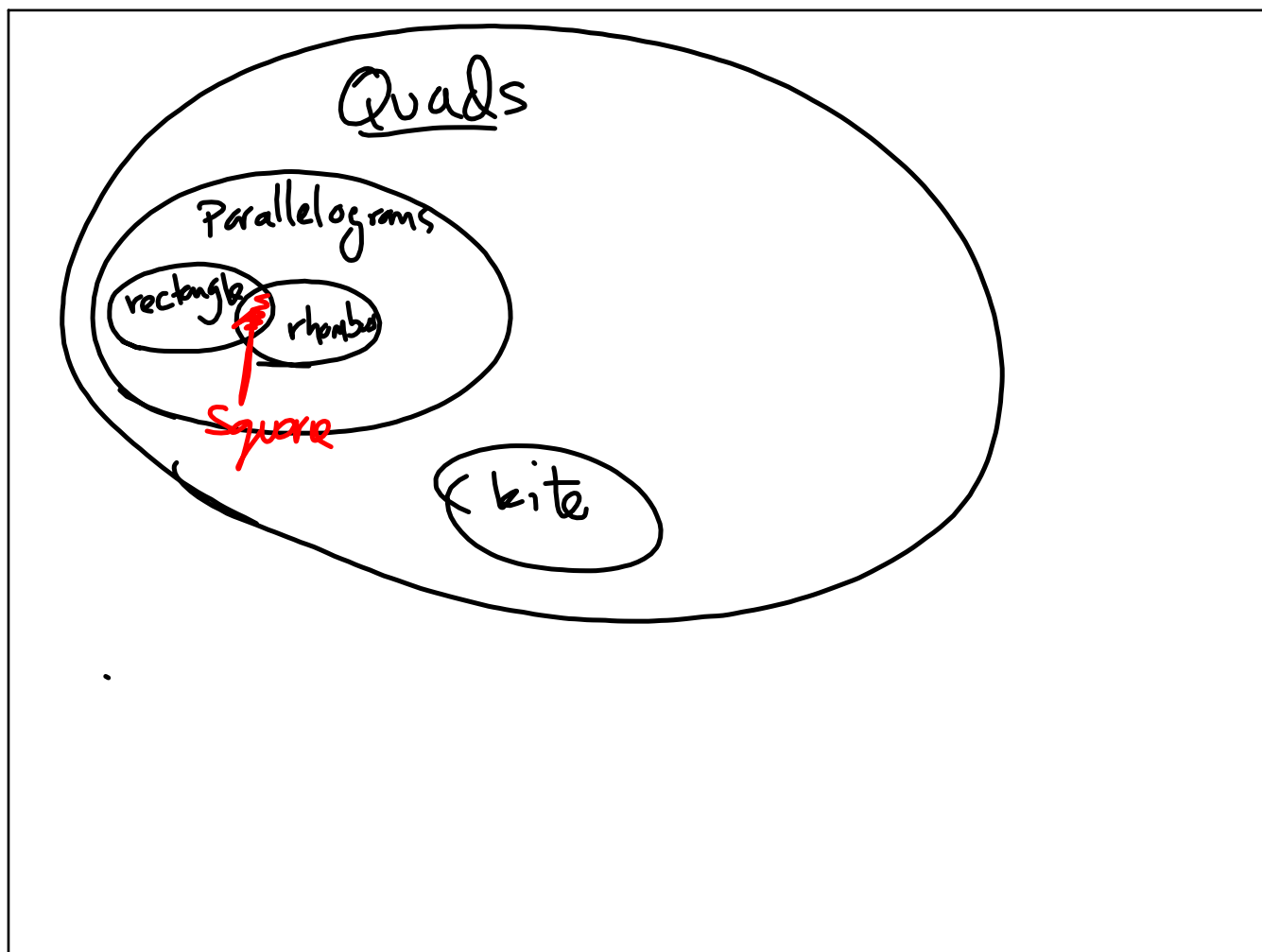
$$CD = 20$$

$$BF = 12$$

$$FD = x + 2y$$

Find: The perimeter of BCDF





Quadrilaterals WAR

RULES:

1. Each person must fill in the blank on their statement with the most appropriate choice of **some**, **all**, or **none**
2. Students on the same team may help each other!
3. Each person must stand and read their own statement aloud
4. After a statement is read the other team has a chance to challenge the answer given.
5. If an answer is challenged, the challenging team must provide an explanation.

SCORING:

+1 point for correct answer
0 points for incorrect answer

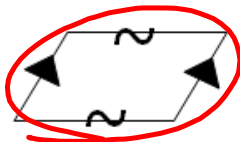
CHALLENGE:

+2 if challenge is won
-1 if challenge is lost

are
Methods for Proving a Quadrilateral is a Parallelogram

1) If both pairs of opposite sides of a quadrilateral are parallel, then the quadrilateral is a parallelogram (reverse of the definition).

1

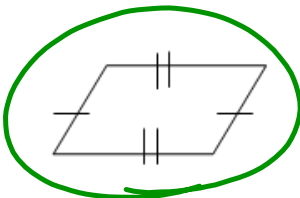


Proving Quads are #1

Both pairs of opp sides $\parallel \Rightarrow$ \parallel -gram

2) If both pairs of opposite sides of a quadrilateral are congruent, then the quadrilateral is a parallelogram (converse of a property).

#2



Both pairs of opp sides $\cong \Rightarrow$ \parallel -gram

3) If one pair of opposite sides of a quadrilateral are both parallel and congruent, then the quadrilateral is a parallelogram.

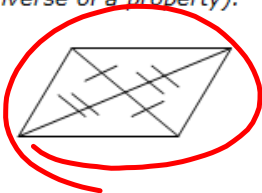
#3



One pair of opp sides \cong and $\parallel \Rightarrow$ \parallel -gram

4) If the diagonals of a quadrilateral bisect each other, then the quadrilateral is a parallelogram (converse of a property).

#4



Diagonals bisect each other \Rightarrow \parallel -gram

5) If both pairs of opposite angles of a quadrilateral are congruent, then the quadrilateral is a parallelogram (converse of a property).

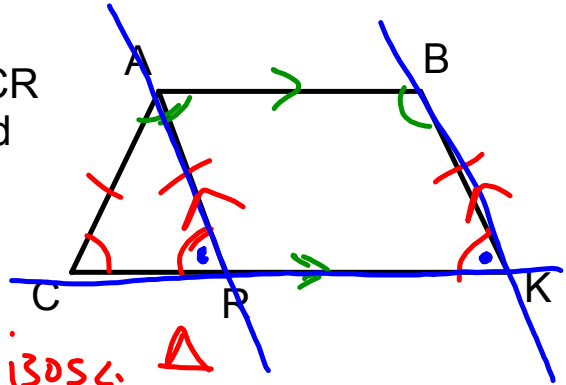
#5



Both pairs of opp \angle s $\cong \Rightarrow$ \parallel -gram

Given: $\triangle CAR$ is isosceles with base CR
 BACK is an isosceles trapezoid

Prove: BARK is a parallelogram



① $\overline{AC} \cong \overline{AR}$

② $\overline{AC} \cong \overline{BK}$

③ $\overline{AR} \cong \overline{BK}$

④ $\overline{AB} \parallel \overline{CK}$

⑤ $\angle C \cong \angle ARC$

⑥ $\angle C \cong \angle K$

⑦ $\angle R \cong \angle K$

⑧ $\angle A + \angle K$ are corr. \angle 's

⑨ $\overline{AR} \parallel \overline{BK}$

⑩ BARK is a \square

① Def of isosc. \triangle

② Def of isosc \square

③ Transitive Prop.

④ Def of isosc Trap.

⑤ Def of isosc \triangle

⑥ Def of isosc \square

⑦ Transitive Prop

⑧ Assumed

⑨ If corr \angle 's $\cong \Rightarrow$ lines are \parallel

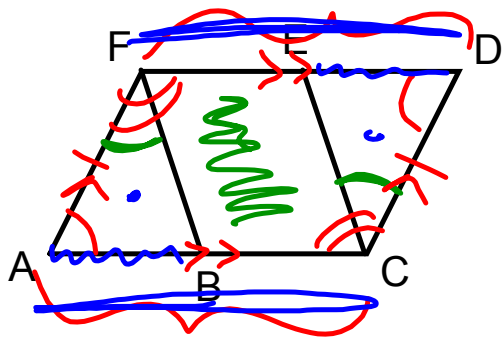
⑩ If 1 pair of sides is \cong + \parallel , then it is a \square

Given: $ACDF$ is a parallelogram

$\angle AFB = \angle ECD$

Prove: $FBCE$ is a parallelogram

$FB \parallel EC$
~~#1 #3~~

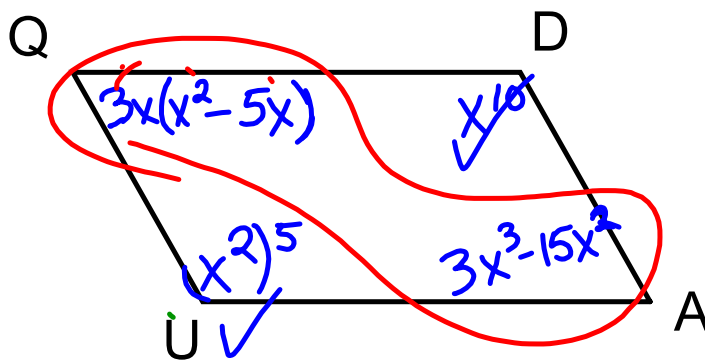


S	R
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- ① $\angle AFB \cong \angle ECD$
- ② $\angle A \cong \angle D$
- ③ $\overline{AF} \cong \overline{CD}$
- ④ $\triangle AFB \cong \triangle ECD$
- ⑤ $\overline{AB} \cong \overline{ED}$
- ⑥ $\overline{FE} \cong \overline{BC}$
- ⑦ $FBCE$ is a \square

- ① G
- ② Def of \square
- ③ Same as 2
- ④ ASA
- ⑤ CPCTC
- ⑥ Subtraction
- ⑦ #3 (if 1 side is \parallel + \cong , then it is a \square)

Show that QUAD is a parallelogram



$$x^2 x^2 x^2 x^2 x^2$$

$$(x^2)^5 = x^{10}$$

$$x^{10} = x^{10}$$

$$3x(x^2 - 5x) = 3x^3 - 15x^2$$

$$3x^3 - 15x^2 = 3x^3 - 15x^2$$

Condition #5

Instagram Project

Instagram Poster:

- Sign up for a shape.
- Make up a username and description (definition).
- Take at least 5 self portraits (draw non-congruent examples)
- Write captions, hashtags and comments from other shapes (describe all properties)

		Points Earned
Username and Definition 5 pts	*Unique Name * Clear Definition in description	
>5 Selfie Portraits 10 pts	* Must draw or make at least 5 selfies that are non-congruent examples	
Write Captions, Hashtags and comments from other shapes 25 pts	* Using other shapes as "friends" comments and captions must describe all the properties of your shape	
Total		

Due 12/10 A Day and 12/11 B Day



Homework

p. 251 #1 - 8, 11, 13

