

Honors Geometry Chapter 5 Review

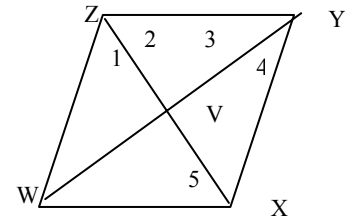
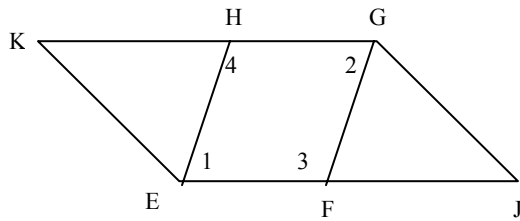
- Study definitions & theorems for always, sometimes, & never true questions.
 - a) A parallelogram ___ has congruent consecutive sides.
 - b) The diagonals of a parallelogram are ___ congruent.
 - c) Both pairs of opposite angles of a trapezoid are ___ congruent.
 - d) A parallelogram with four right angles is ___ a square.
- Know how to identify if the quadrilateral is rectangle, rhombus, square, etc.

Problems to review:

- p. 170 19-28
- p. 180 7-17
- p. 187 11-19
- p. 192 1-9

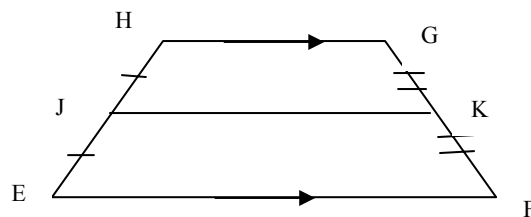
Proofs: Know how to prove something is a parallelogram.

Given: $\angle 1 \cong \angle 2$, $\angle 3 \cong \angle 4$, $HK = FJ$
 Prove: $KEJG$ is a parallelogram



Sample Problems:

1. $\triangle WYZ \cong$ ___
 2. $\angle ZWX \cong$ ___
 3. If $m\angle WXY = 13x - 7$ and $m\angle YZW = 9x + 29$, then $m\angle WXY =$ ___. (numerical answer)
 4. If $m\angle 1 =$ ___, $m\angle 2 = 64$, and $m\angle 3 = 38$, then (a) $WY =$ ___ and (b) $m\angle 5 =$ ___
 5. If $WV = 4y + 2$, $YV = 6y$, and $ZV = 3y$, then (a) $WY =$ ___ and (b) $XZ =$ ___
 6. If $XY = 15t - 3$, $YZ = 10t + 2$, and $WZ = 9t + 21$, then $t =$ ___
7. \overline{JK} is the ___ of the trapezoid.
8. If $EH = FG$ and $m\angle E = 65$, then (a) $m\angle G =$ ___ (b) $m\angle GKJ =$ ___
9. If $EF = 36$, $JK = 4x$, and $GH = 2x + 6$, then $x =$ ___



Answers:

a) sometimes b) sometimes c) never d) sometimes

1. $\triangle YWX$
2. $\angle XYZ$
3. 110
4. a. 30 b. 64
5. a. 12 b. 6
6. 4
7. median
8. a. 115 b. 65
9. 7

*There is more than 1 way to prove this

Proof:

- | | |
|--|--|
| 1) ---- | 1) Given |
| 2) HEFG is a parallelogram | 2) opposite angles of a parallelogram congruent |
| 3) $\overline{HG} \cong \overline{EF}$ | 3) opp side so of a parallelogram congruent |
| 4) $\overline{HG} \parallel \overline{EF}$ | 4) defn of parallelogram |
| 5) $GH + HK = GK$
$EF + FJ = EJ$ | 5) segment addition |
| 6) $GK = EJ$ | 6) Transitive |
| 7) KEJG is a parallelogram | 7) 1 pair of opp sides \parallel and congruent |