

**Geometry Test 10 Mr. Holcomb 2008/2009**  
**Sponge Bob or Bugs Bunny?**

**Problem**

1. (1 point) The longest side of triangle  $ABC$  is 10 cm. Another side is 8 cm. What has to be true about the length of the third side of triangle  $ABC$ ?

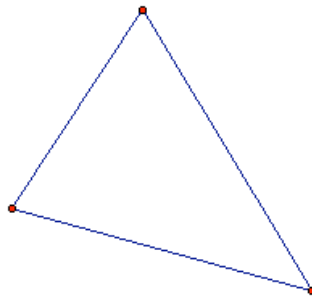
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2. (1 point) The longest side of triangle  $DEF$  has is 10 cm. Another side is 8 cm.
- a) How long does the third side of triangle  $DEF$  need to be so that  $DEF$  is a right triangle?

- b) If triangle  $DEF$  was an acute triangle, what could be a length of its third side?

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3. (5 points) Construct the circumcircle for this triangle. Justify by showing clear construction marks.



4. (5 points) Translate  $|x - 8| = 12$  into a sentence about numbers on the number line. You do not have to solve it.

5. (5 points) Solve the following. Include a number line drawing.

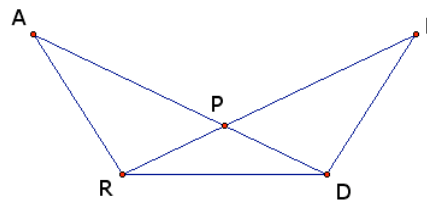
a.  $|x - 8| > 10$

b.  $|2x + 8| = 5$

6. (1 point)

Given:  $\overline{AP} \cong \overline{IP}$ ,  $\overline{RP} \cong \overline{PD}$

Prove:  $\overline{AR} \cong \overline{ID}$



7. (1 point)

Given:  $\overline{KY} \cong \overline{LY}$ ,  $\overline{YE} \perp \overline{KL}$

Prove:  $E$  is the midpoint of  $\overline{KL}$

