Girls Get
Curves

Solution Guide for Chapter 3

Here are the solutions for the "Doing the Math" exercises in *Girls Get Curves*!

DTM from p. 42

2. We <u>are</u> allowed to assume straight lines from diagrams, like for example, since $\overleftrightarrow{RZ}$ appears to be a straight line, it really is! And since A appears on that line, we can also assume that R, A, and Z are all collinear.

Answer: True

3. Hm, is CY > RZ? It sure looks like it from the diagram, but we certainly can't assume it.

Answer: Not enough information

4. Is it necessarily true that $m\angle CAR + m\angle RAY = 180°$? Yep! We can see that $\angle CAR \,\&\, \angle RAY$ add together to form a straight angle $\angle CAY$. How do we know for sure? Because we <u>can</u> assume straight lines and also intersecting lines, that's all we need to know that yes, those angles do add up to a straight line!

Answer: True

5. Since we <u>can</u> assume from the diagram that the lines $\overleftrightarrow{CY}$ & $\overleftrightarrow{RZ}$ intersect at the point A, we know that Y cannot be on the same line as $\overleftrightarrow{RZ}$, so that means R, A, and Y cannot be collinear.

Answer: False

6. Since we know that A is between R and Z (this is something we can assume when three points are collinear like this), that means it must be true that RA < RZ, which means that RZ > RA is false!

Answer: False

7. It sure looks like $\overline{CR} \parallel \overline{ZY}$, but we certainly can't assume it!

Answer: Not enough information

8. Yes! $\angle CAY$ sure looks straight, and we ARE allowed to assume straight angles from diagrams. So that means we can assume that $\angle CAY = 180°$.

Answer: True

9. It sure looks like $\angle RZY$ is a right angle, but we're not allowed to assume it! After all, it could be like 90.000001°, and it wouldn't be a right angle, would it?

Answer: Not enough information

10. We are allowed to assume vertical angles, and that's what $\angle CAR$ & $\angle ZAY$ are! Since vertical angle pairs are always congruent, that means we know for sure that $\angle CAR \cong \angle ZAY$.

Answer: True