



Solution Guide for Chapter 4

Here are the solutions for the “Doing the Math” exercises in *Kiss My Math!*

DTM from p.57-58

2. $2|7 - 8| + 5$

First, let's simplify what's inside the bars: $7 - 8 = -1$. So, $|7 - 8| = |-1| = 1$, and we can rewrite the whole expression as: $2(1) + 5$, and finish it: $2 + 5 = 7$.

Answer: **7**

3. $5 - |-3 - (-1)| - 1$

Again, let's deal with inside the bars and pretend nothing else exists: $-3 - (-1)$. Let's rewrite the double negative as a plus sign, and get: $-3 + 1 = -2$. So, this means: $|-3 - (-1)| = |-2| = 2$, and we can rewrite the whole expression as: $5 - 2 - 1$. At this point, let's rewrite subtraction as adding negatives, and get: $5 + (-2) + (-1)$. Combining the first two terms, we get: $5 + (-2) = 3$. Combining this with the last term we get: $3 + (-1) = 2$.

Answer: **2**

4. $1 - \left| -\frac{1}{2} \right|$

Don't be tempted change the double negative into a plus sign; absolute value bars don't let you do that! And skipping steps even in "easy" problems like these can cause problems when I comes to absolute value expressions. First, deal just with the absolute value expression: $\left| -\frac{1}{2} \right| = \frac{1}{2}$, right? So we can now rewrite our expression as: $1 - \frac{1}{2}$, and finish the problem: $1 - \frac{1}{2} = \frac{1}{2}$.

Answer: $\frac{1}{2}$

5. $1 - \left| -\frac{1}{2} \right| + 2|7 - 8|$

well, if you look at the first part of problem # 1, you'll see that we already discovered $2|7 - 8| = 2$. So we can rewrite this problem as: $1 - \left| -\frac{1}{2} \right| + 2$. But now look at problem #4,

and see how we learned that $1 - \left| -\frac{1}{2} \right| = \frac{1}{2}$. So this means our whole problem can be

written as: $\frac{1}{2} + 2$. And if you're clever, there's no need to add fractions here; this can be

written either as the mixed number $2\frac{1}{2}$, or you can convert this into an improper

fraction: $\frac{5}{2}$.

Answer: $2\frac{1}{2}$ or $\frac{5}{2}$