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Absolute Value of a Number

The **absolute value** of a number is the distance between that number and zero on the number line. It is denoted by two bars (| |). Since we are referring to distance, the absolute value of a number can never be negative. However, if a negative sign is outside the absolute value, it is not affected by the absolute value symbol.

Examples :

1. $|0| = 0$
2. $|-2| = 2$
3. $|4| = 4$
4. $-|3| = -3$
5. $-|-5| = -5$
6. $|6| + |-4| = 10$

Practice Exercises 1

A. Give the value of the following.

- | | |
|------------------------|-------------------------|
| _____ 1. $ 4 $ | _____ 6. $ 16 + -4 $ |
| _____ 2. $ -20 $ | _____ 7. $ 6 - 4 $ |
| _____ 3. $- 15 $ | _____ 8. $ 10 + 4 $ |
| _____ 4. $- -12 $ | _____ 9. $ 15 - -5 $ |
| _____ 5. $ -5 + -5 $ | _____ 10. $ -8 + -5 $ |

B. Write $>$, $<$ or $=$ on the blank to make the statement true.

- _____ 1. $|4|$ _____ $|-20|$
- _____ 2. $|7|$ _____ $|25|$
- _____ 3. $|-20|$ _____ $|4|$
- _____ 4. $-|15|$ _____ $|-20|$
- _____ 5. $|-10|$ _____ $|6 - 4|$
- _____ 6. $|8|$ _____ $|10 + 4|$
- _____ 7. $|10 + 4|$ _____ $|-8| + |-5|$
- _____ 8. $|-5| + |-5|$ _____ $|-5| + |-5|$
- _____ 9. $|16| + |-4|$ _____ $|20|$
- _____ 10. $|3 - 2| + |10 + 4|$ _____ $|10|$