

Using Color in Mathematics

Using color appropriately can be very helpful to the visual learner in mathematics. Consider using erasable colored pencils (regular colored pencils don't erase well). Using color doesn't mean to make every problem look like a rainbow; use of color should have specific purpose(s).

$$4[6 - 3(2-1)^2 + 4] + (-2)$$

- Here's a problem that can look confusing because of the "nesting" of grouping symbols. Color could be used to help the visual learner better see the beginning and end of each set of grouping symbols.

$$4 \left[6 - 3(2-1)^2 + 4 \right] + (-2)$$

- Problems like fractions can become visually confusing as students mark changes on the original problem. Few are willing to re-write the problem first. But using a different color can help a visual learner distinguish the original problem from the changes.

So $\cancel{4}^3 \cdot \frac{1}{\cancel{2}}x + \cancel{\frac{2}{3}} = \frac{\cancel{4}^5}{\cancel{6}}$ LCD = 6 could become $\overset{3}{\color{red}4} \cdot \frac{\overset{2}{\color{red}1}}{\color{red}2}x + \frac{\overset{1}{\color{red}2} \cdot \color{red}5}{\color{red}6}$ LCD = 6

- Reviewing what they did in each step can become visually confusing to students. Like the fractions above, the steps can be better distinguished for a visual learner by using a different color to mark changes, and then rewriting the problem in that color. This can be done in as little as two or three colors used one at a time.

$$\begin{aligned} 2(x+6) &= x - (-8) \\ 2x + 12 &= x - (-8) \\ 2x + 12 &= x + 8 \\ -x & \quad -x \\ x + 12 &= 8 \\ x + \cancel{12} &= 8 \\ x &= -4 \end{aligned}$$

Or

$$\begin{aligned} 2(x+6) &= x - (-8) \\ \color{red}2x + 12 &= x - (-8) \\ \color{red}2x + 12 &= x + 8 \\ \color{red}-x & \quad \color{red}-x \\ \color{red}x + \cancel{\color{red}12} &= 8 \\ \color{red}x &= -4 \end{aligned}$$