Panel 1 — Feb 8-9:04 AM

February 8, 2016

1.3

#15) $\quad -\dfrac{19}{4} \cdot -\dfrac{18}{13} = \boxed{\dfrac{171}{26}}$

(with $\dfrac{19}{4}$ reduced: 2; $\dfrac{18}{13}$: 9)

Panel 2 — Feb 8-9:10 AM

#39) $\quad \dfrac{8}{9} - \left| \dfrac{5}{2} - \dfrac{2}{5} \right|$

$\dfrac{8}{9} - \left| \dfrac{25-4}{10} \right| \qquad \leftarrow LCD$

$\dfrac{8}{9} - \left| \dfrac{21}{10} \right|$

$\dfrac{8}{9} - \dfrac{21}{10}$

$\dfrac{8(10) - 21(9)}{90}$

$\dfrac{80 - 189}{90}$

$\boxed{-\dfrac{109}{90}}$

Panel 3 — Feb 8-9:16 AM

#57) $\quad 2x^2 - 2xy - 3y^2 \qquad x = \dfrac{3}{2} \quad y = -\dfrac{3}{4}$

$2\left(\dfrac{3}{2}\right)^2 - 2\left(\dfrac{3}{2}\right)\left(-\dfrac{3}{4}\right) - 3\left(-\dfrac{3}{4}\right)^2$

$2\left(\dfrac{9}{4}\right) - 3\left(-\dfrac{3}{4}\right) - 3\left(\dfrac{9}{16}\right)$

$\dfrac{9}{2} + \dfrac{9}{4} - \dfrac{27}{16}$

$\dfrac{18+9}{4}$

$\dfrac{27}{4} - \dfrac{27}{16}$

$\dfrac{108 - 27}{16}$

$\boxed{\dfrac{81}{16}}$

Panel 4 — Feb 8-9:22 AM

① $\dfrac{1}{2} + \dfrac{1}{2} \times 2 + 2 \div \dfrac{1}{2} - \dfrac{1}{2}$

② $\dfrac{\frac{5}{6} + 3}{4}$

③ $\dfrac{\frac{1}{2} - \frac{1}{3} + \frac{1}{4}}{5}$

④ $\dfrac{\frac{3}{x} + \frac{1}{x}}{\frac{x^2}{2}}$

⑤ $\dfrac{\frac{6}{11} - \frac{1}{11}}{\frac{2}{3} - \frac{1}{5}}$