Panel 1 — Dec 4-9:04 AM

December 4, 2017

* Exam #3 – Wednesday

#10) $\sqrt{200 m^4 n}$

$\sqrt{200} \cdot \sqrt{m^4} \cdot \sqrt{n}$

$\sqrt{100 \cdot 2} \cdot \sqrt{(m^2)^2}$

$\sqrt{100} \cdot \sqrt{2}$

$10\sqrt{2} \cdot m^2 \cdot \sqrt{n}$

$\boxed{10 m^2 \sqrt{2n}}$

Panel 2 — Dec 4-10:12 AM

Completing the Square

$\text{Area} = l \cdot w$

$= (a+b) \cdot (a+b)$

$= (a+b)^2$

$= \boxed{a^2 + 2ab + b^2}$

Perfect Square Trinomial

Panel 3 — Dec 4-10:16 AM

$(\overset{a}{x} + \overset{b}{5})^2 = (x+5) \cdot (x+5)$

$= x^2 + 5x + 5x + 25$

$= x^2 + 2(5x) + 25$

$= \boxed{x^2 + 10x + 25}$

P.S.T.

$x^2 + 10 x + C$

Completing the Square Steps

(a) $10 \cdot \frac{1}{2} = \frac{10}{2} = 5$

(b) $(5)^2 = 5 \cdot 5 = \boxed{25}$ "C"

$= \text{Area} = x^2 + 10x + 25$

Panel 4 — Dec 4-10:23 AM

#1) $x^2 - 38x + C$

(a) $\frac{-38}{1} \cdot \frac{1}{2} = \frac{-38}{2} = -19$

(b) $(-19)^2 = (-19)(-19) = \boxed{361}$ "C"

$\boxed{x^2 - 38x + 361}$

P.S.T.

$(x - 19)^2 = (x-19)(x-19)$

$= x^2 + 2(-19x) + 361$

$= x^2 - 38x + 361 \checkmark$

Panel 5 — Dec 4-10:27 AM

#2) $x^2 - 32x + C$

(a) $\frac{-32}{1} \cdot \frac{1}{2} = -16$

(b) $(-16)^2 = \boxed{256}$ "C"

$x^2 - 32x + 256 = (x-16)^2$

Panel 6 — Dec 4-10:30 AM

#3) $x^2 - \frac{5}{3}x + C$

(a) $-\frac{5}{3} \cdot \frac{1}{2} = \frac{-5}{6}$

(b) $\left(-\frac{5}{6}\right)^2 = \boxed{\frac{25}{36}}$ "C"

$x^2 - \frac{5}{3}x + \frac{25}{36} = \left(x - \frac{5}{6}\right)^2$

#8) $x^2 \boxed{+7}x + c$

ⓐ $\frac{7}{1} \cdot \frac{1}{2} = \frac{7}{2}$

ⓑ $\left(\frac{7}{2}\right)^2 = \boxed{\frac{49}{4}}$

"C"

$x^2 + 7x + \frac{49}{4} = \left(x + \frac{7}{2}\right)^2$

Dec 4-10:32 AM

$x^2 - 3x \boxed{+5} = 0$

$x^2 - 3x + c = -5$

ⓐ $-\frac{3}{1} \cdot \frac{1}{2} = -\frac{3}{2}$

ⓑ $\left(-\frac{3}{2}\right)^2 = \boxed{\frac{9}{4}}$ ← add to both sides of the equation.

$\boxed{x^2 - 3x + \frac{9}{4}} = \frac{-5}{1} + \frac{9}{4}$

P.S.T.

$\left(x - \frac{3}{2}\right)^2 = \frac{-20+9}{4} = \frac{-11}{4}$

$\sqrt{\left(x - \frac{3}{2}\right)^2} = \pm\sqrt{-\frac{11}{4}}$

$x - \frac{3}{2} = \pm\frac{\sqrt{-11}}{\sqrt{4}} = \pm\frac{\sqrt{-11}}{2}$

$\boxed{x = \pm\frac{\sqrt{-11}}{2} + \frac{3}{2}}$

Dec 4-10:33 AM

Ways to <u>Solve</u> Quadratics

$ax^2 + bx + c = 0$

① Factor

$x^2 - 7x + 12 = 0$

$(x - 4)(x - 3) = 0$

$x = 4 \ \& \ x = 3$

② Square Root Property

$\sqrt{(x+3)^2} = \pm\sqrt{9}$

$x + 3 = \pm 3$

$x = \pm 3 - 3$

$x = 0 \ \& \ x = -6$

Dec 4-10:41 AM

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③ Compliting the Square

④ Quadratic Formula

$ax^2 + bx + c = 0$

$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Dec 4-10:45 AM