

Happy April
Tools! ☺

Apr 1-9:54 AM

10.6
#7) $(\sqrt{7-6x})^2 = (3-2x)^2$
 $7-6x = 9-12x+4x^2$
 $0 = 4x^2 - 6x + 2$
 $0 = (2x-2)(2x-1)$
 F: $2x \cdot 2x = 4x^2$
 O: $2x \cdot (-1) = -2x$
 I: $-2 \cdot (2x) = -4x$
 L: $2 \cdot 1 = 2$

Apr 1-9:57 AM

$x = 1$ $x = \frac{1}{2}$

$\sqrt{7-6(1)} = 3-2(1)$	$\sqrt{7-6(\frac{1}{2})} = 3-2(\frac{1}{2})$
$\sqrt{7-6} = 3-2$	$\sqrt{7-3} = 3-1$
$\sqrt{1} = 1$	$\sqrt{4} = 2$
$1 = 1$	$2 = 2$

Apr 1-10:12 AM

Exam #2 - Friday
14 Questions
Plus a Bonus
E1: 40%
60%

Apr 1-10:14 AM

10.6
#8 * To solve a radical equation, we must first isolate one radical.

$(\sqrt{y-7})^2 = (7-\sqrt{y})^2$
 $y-7 = (7-\sqrt{y})(7-\sqrt{y})$ FOIL
 $= 49 - 7\sqrt{y} - 7\sqrt{y} + y$
 $y-7 = 49 - 14\sqrt{y} + y$
 $-49 - y = -14\sqrt{y}$
 $\frac{-56}{-14} = \frac{-14\sqrt{y}}{-14}$
 $(4)^2 = (\sqrt{y})^2$
 $16 = y$

Check
 $\sqrt{16-7} = 7-\sqrt{16}$
 $\sqrt{9} = 7-4$
 $3 = 3$

we still have a radical! It must be isolated.

Apr 1-10:17 AM

#4) $6 - \sqrt{3y-4} = 2$
 * Isolate the Radical!
 $6-2 = \sqrt{3y-4}$
 $(4)^2 = (\sqrt{3y-4})^2$
 $16 = 3y-4$
 $20 = 3y$
 $\frac{20}{3} = y$

Apr 1-10:25 AM

$$\begin{aligned}
 -\sqrt{3y-4} &= 2-6 \\
 (-\sqrt{3y-4})^2 &= (-4)^2 \\
 3y-4 &= 16
 \end{aligned}$$

Apr 1-10:29 AM

10.3
#16)

$$\sqrt{x^3} \cdot \sqrt[3]{x^2} \cdot \sqrt[6]{x^5}$$

Key: Convert to exponential form

$$x^{3/2} \cdot x^{2/3} \cdot x^{5/6}$$

* Note: we have some bases!

Product Rule

$$x^{\frac{3}{2} + \frac{2}{3} + \frac{5}{6}} = x^{\frac{9+4+5}{6}} = x^{\frac{18}{6}} = x^3$$

x^3

Apr 1-10:30 AM

#18)

$$\frac{6\sqrt[3]{80x^2}}{3\sqrt[3]{5x^{-1}}} = 2\sqrt[3]{\frac{80x^2}{5x^{-1}}}$$

$$= 2\sqrt[3]{16x^{2-(-1)}} = 2\sqrt[3]{16x^3}$$

$4x\sqrt[3]{2}$

Apr 1-10:36 AM

- Radicals
- ① Rules of Exponents
 - ② Rules of Radicals

Apr 1-10:41 AM

$$g(x) = -\sqrt{-x+5} - 2$$

$h=5; k=-2$

$$\begin{aligned}
 -x+5 &\geq 0 \\
 -x &\geq -5 \\
 \frac{-x}{-1} &\geq \frac{-5}{-1} \\
 x &\leq 5
 \end{aligned}$$

D: $(-\infty, 5]$

Apr 1-10:46 AM

$$\frac{a^{12}}{a^2} = a^{12-2} = a^{10}$$

$$\frac{a^3}{a^2} = \frac{a \cdot a \cdot a}{a \cdot a} = a$$

$$a^{3-2} = a^1 = a$$

Apr 1-10:49 AM