

T/PC
P.1, P.3, P.5

Detailed Sol'n's

15. $\frac{-35}{-35} \frac{1}{-35}$

5x $\begin{matrix} x & + \\ 5x^2 & -35x \\ x & -7 \end{matrix}$

$(5x+1)(x-7)$
 $5x+1=0 \Rightarrow 5x=-1 \Rightarrow x=-1/5$
 $x-7=0 \Rightarrow x=7$

LCM of 3+5 = 15

1. $\frac{15}{1} \left(\frac{2}{5} x \right) - \frac{15}{1} \left(\frac{1}{3} x \right) = \frac{3 \cdot 15}{1}$
 $3(2x) - 5(x) = 45$
 $6x - 5x = 45$
 $x = 45$

2. $\frac{12(x-48)}{12} = \frac{24}{12}$
 $x-48=2$
 $+48 \quad +48$
 $x=50$

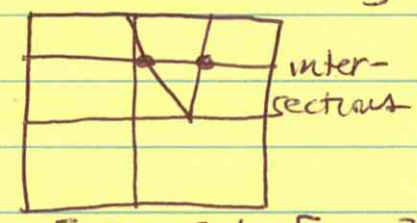
3. LCM of 3+5 = 15

$\frac{15}{1} \left(\frac{3x-6}{3} \right) + \frac{15}{1} \left(\frac{5x+9}{5} \right) = \frac{-2 \cdot 15}{1}$
 $5(3x-6) + 3(5x+9) = -30$
 $15x - 30 + 15x + 27 = -30$
 $30x - 3 = -30$
 $+3 \quad +3$
 $30x = -27$
 30
 $x = \frac{-27}{30} = -\frac{9}{10}$

4. $x^2 = 7 - 4x$
 $x^2 + 4x = 7$
 $\left(\frac{4}{2}\right)^2 \nearrow x^2 + 4x + 4 = 7 + 4$
 $2^2 \nearrow x^2 + 4x + 4 = 11$
 $4 \nearrow$
Factor left side
 $(x+2)^2 = 11$
 $\sqrt{\quad} \quad \sqrt{\quad}$
 $x+2 = \pm \sqrt{11}$
 $\rightarrow \quad \rightarrow$
 $x = -2 \pm \sqrt{11}$

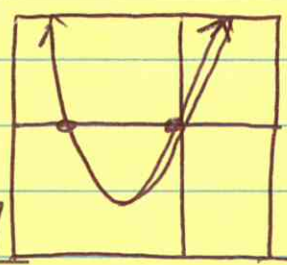
5. $4x^2 + 32 = 24x$
 $4x^2 - 24x = -32$
 $\frac{4}{4}$
 $x^2 - 6x = -8$
 $\left(-\frac{6}{2}\right)^2 \nearrow x^2 - 6x + 9 = -8 + 9$
 $(3)^2 \nearrow (x-3)^2 = 1$
 $9 \nearrow$
 $\sqrt{\quad} \quad \sqrt{\quad}$
 $x-3 = \pm 1$
 $+3 \quad +3$
 $x = 3 \pm 1 \quad x = 2, 4$

6. $y_1 = 15x - 6$
 $y_2 = 5 \quad x = 1/5$
 $x = 11/5$



7. Using Intercepts (zeros)

$x \approx -5.41$
 $x \approx -.09$



$[-10, 5]$ by $[-20, 10]$

8. $\left(\frac{30a^7b^7}{ab^4} \right) \left(\frac{2b^2}{6a^3b^9} \right) = \frac{60a^7b^9}{6a^4b^{13}} = 10a^3b^{-4}$
 $= \frac{10a^3}{b^4}$

9. $\left(\frac{3}{xy^2} \right)^{-2} = \left(\frac{xy^2}{3} \right)^2 = \frac{x^2y^4}{9}$

10. $\frac{3(v+2)^2}{3} = \frac{45}{3}$
 $(v+2)^2 = 15$
 $\sqrt{\quad} \quad \sqrt{\quad}$
 $v+2 = \pm \sqrt{15}$
 $-2 \quad -2$
 $v = -2 \pm \sqrt{15}$

13. $x = \frac{-(-6) \pm \sqrt{(-6)^2 - 4(1)(2)}}{2(1)} = \frac{6 \pm \sqrt{36-8}}{2} = \frac{6 \pm \sqrt{28}}{2} \xrightarrow{4} \frac{6 \pm 2\sqrt{7}}{2} = 3 \pm \sqrt{7}$

14. Rewrite 1st, Triple each
 $-4 \leq \frac{4x+2}{3} \leq 8$ part next

$\frac{-12}{-2} \leq \frac{4x+2}{-2} \leq \frac{24}{-2}$ $\rightarrow$ $\frac{-14}{4} \leq \frac{4x}{4} \leq \frac{22}{4}$ $\frac{-14}{4} \leq x \leq \frac{22}{4}$ $\frac{-7}{2} \leq x \leq \frac{11}{2}$
reduce