3.4   Solving First-Degree Equations Involving One Step – Part 2

Fractions are commonly used to represent division. The equations below are written using a division symbol. Rewrite each equation using a fraction.

LP#1 $h \div 4 = 6$	$b \div 3 = 25$	$-13 = d \div 7$
LP#2 $-9 = g \div 4$	$31 = a \div 2$	$x \div 11 = 7$

Go to http://en.wikipedia.org/wiki/Equations#Properties. Read the section titled "Properties". Which of the five properties must we use when solving the equation $x \div 7 = 21$?

State which property to use here.	Solve the equation here.

Class Notes – Solve each first-degree equation and check. If you do not solve an equation, explain why.

LP#3 $h \div 3 = 14$	$n^2 \div 4 = 9$	$8 = x \div 7$
LP#4 $\dfrac{y}{5} = 9$	$\dfrac{x}{6} = 30$	$\dfrac{w^2}{11} = 5$

Lesson 3.4

LP#5 $10 = \dfrac{g}{-4}$	$\dfrac{n}{-6} = -12$	$\dfrac{k}{-7} = 121$

Class Notes – Solve each equation for x.

LP#6 $n = x \div m$	$\dfrac{x}{y} = z$	$x \div h = g$
LP#7 $\dfrac{x}{b} = 4a$	$\dfrac{x}{de} = c$	$5r = \dfrac{x}{jk}$

Review – Solve each first-degree equation and check. If you do not solve an equation, explain.

R#1 $x \div 5 = 10$	$\dfrac{y^2}{8} = 2$	$\dfrac{w}{3} = 12$
R#2 $p^2 \div 12 = 5$	$x \div 2 = 27$	$\dfrac{k}{13} = 5$
R#3 $\dfrac{h}{8} = 17$	$x^2 \div 5 = 5$	$\dfrac{w}{20} = 16$

Homework –

Solve each first-degree equation and check. If you do not solve an equation, explain.

1) $x \div 11 = 154$ **2)** $y \div 6 = 108$ **3)** $z \div 7 = 84$ **4)** $x \div 14 = 60$

5) $m^2 \div 2 = 18$ **6)** $x \div 3 = 76$ **7)** $p^2 \div 3 = 12$ **8)** $x \div 7 = 16$

9) $\dfrac{k}{4} = 36$ **10)** $\dfrac{m}{9} = 54$ **11)** $\dfrac{b}{8} = 75$ **12)** $\dfrac{k}{2} = 99$

13) $\dfrac{h}{24} = 14$ **14)** $\dfrac{p^2}{5} = 78$ **15)** $\dfrac{j}{25} = 12$ **16)** $\dfrac{x^2}{3} = 23$

Synthesis

Simplify both sides of the equation. Do not solve.

17) $5(x - 3) + 2 = 6 + x + 20$ **18)** $2(y + 9) - 5 = 3y + 15 - 8$ **19)** $10 + 7w - 15 = 6(3w - 11) - 3$

20) $7(v - 4) = 10(v - 6)$ **21)** $8(x + 11) = 10(x - 16)$ **22)** $4(m + 7) = 7(m + 13)$