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**5.4 Solving Equations with Decimals**


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For any real numbers $a$ , $b$ , and $c$ :		Examples
<b>Addition Property of Equality</b>	If $a = b$ , then $a + c = b + c$	If $x - 2 = 5$ , then $x - 2 + 2 = 5 + 2$ $x = 7$
<b>Subtraction Property of Equality</b>	If $a = b$ , then $a - c = b - c$	If $x + 2 = 5$ , then $x + 2 - 2 = 5 - 2$ $x = 3$
<b>Multiplication Property of Equality</b>	If $a = b$ , then $ac = bc$	If $\frac{x}{2} = 5$ , then $\frac{x}{2} \cdot 2 = 5 \cdot 2$ $x = 10$
<b>Division Property of Equality</b>	If $a = b$ and $c \neq 0$ , then $\frac{a}{c} = \frac{b}{c}$	If $2x = 6$ , then $\frac{2x}{2} = \frac{6}{2}$ $x = 3$

<i>Demonstration Problems</i>	<i>Practice Problems</i>
Add and simplify, if possible. <b>1. (a)</b> $y + 2.7 = -5.3$	Solve. <b>1. (b)</b> $y + 2.3 = -4.7$
Answers: <b>1. (b)</b> -7	

<i>Demonstration Problems</i>	<i>Practice Problems</i>
Solve. <b>2. (a)</b> $a - 3.93 = -2.86$	Solve. <b>2. (b)</b> $a - 4.75 = -1.39$
<b>3. (a)</b> $-8.4 = 0.7m$	<b>3. (b)</b> $-4.8 = 0.8m$
Answers: <b>2. (b)</b> $a = 3.36$ ; <b>3. (b)</b> $m = -6$	

<i>Demonstration Problems</i>	<i>Practice Problems</i>
Solve. <b>4. (a)</b> $\frac{p}{-2.6} = -4.5$	Solve. <b>4. (b)</b> $\frac{p}{-1.8} = -6.5$
<b>5. (a)</b> $\frac{c}{-2} = -34$	<b>5. (b)</b> $\frac{h}{-8} = -40$
Answers: <b>4. (b)</b> $p = 11.7$ ; <b>5. (b)</b> $h = 320$	