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## Lesson 5 Reteach

## Solve Multi-Step Equations

## Example 1

Solve 2(4a-5)=30.

$$
\begin{aligned}
2(4 a-5) & =30 & & \text { Write the equation. } \\
8 a-10 & =30 & & \text { Distributive Property } \\
8 a-10+10 & =30+10 & & \text { Addition Property of Equality } \\
8 a & =40 & & \text { Simplify. } \\
\frac{8 a}{8} & =\frac{40}{8} & & \text { Division Property of Equality } \\
a & =5 & & \text { Simplify. }
\end{aligned}
$$

## Example 2

BOOKS Roland has 3 paperback books and 4 hardcover books. Each $\$ 79\left\{\begin{array}{|l|l|l|}\hline \text { paperback } & \text { paperback } & \text { paperback } \\ \hline----p--- & ---p---\mid & ---p---\mid\end{array}\right.$ hardcover book is worth \$11 more than each paperback book. If the value of all of his

| hardcover | hardcover | hardcover | hardcover |
| :---: | :---: | :---: | :---: |
| $p+11$ | $P+11$ | $P+11$ | $P+11$ | books is $\$ 79$, what is the cost of one paperback book?

Write an equation to represent the bar model.

$$
\begin{aligned}
3 p+4(p+11) & =79 & & \text { Write the equation. } \\
3 p+4 p+44 & =79 & & \text { Distributive Property } \\
7 p+44 & =79 & & \text { Simplify. } \\
7 p+44+(-44) & =79+(-44) & & \text { Addition Property of Equality } \\
7 p & =35 & & \text { Simplify. } \\
\frac{7 p}{7} & =\frac{35}{7} & & \text { Division Property of Equality } \\
p & =5 & & \text { Simplify. }
\end{aligned}
$$

So, the cost of one paperback book is $\$ 5$.

## Exercises

Solve each equation. Check your solution.

1. $2(3 b-1)=40$ 7
2. $49=-7(t+1)$
$-8$
3. $5(1-n)=75$ $-14$
4. $4(x-2)=3(x-3)$ $-1$
5. $-5(p+2)=2(2 p-15)+p$
2
6. $4 z-6=6(z+2)+8$ $-13$
