Algebra 1
Name
Date $\qquad$
1-3 Solving Eqs w/ Variables on Both Sides A\#7

Goal: To solve multistep equations with variables on both sides.

Ex 1: Solve the equation. Check the solution.

$6 x+3=8 x-21$

| Check 1: $7 k-4=5 k+16$ | Check 2: $m-5=3 m$ |
| :--- | :--- |
|  |  |

Ex 2: Solve the equation. Check the solution.
$2(c-6)=9 c+2$

Check 3: $2 d+1=5(3-d) \quad$ Check 4: $8-4 r=(r+5)(-2)$

## Algebra 1

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Ex 3: Solve the equation. Do a mental check.: $\frac{1}{2}(n-4)-7=-2 n+6$

Check 5: $\frac{5}{8}(16 d+24)=6(d-1)+1$

Application: Cameron pays $\$ 0.95$ per song with his current music service. A new download music service charges $\$ 0.89$ per song with a $\$ 12$ joining fee. Should Cameron switch to the new service?

Practice: A two-year prepaid membership at Gym A costs $\$ 250$ for the first year plus $\$ 19$ per month for the second year. A two-year prepaid
 membership at Gym B costs $\$ 195$ for the first year plus $\$ 24$ per month for the second year. Leah says the cost for both gym memberships will be the same after the $11^{\text {th }}$ month of the second year. Do you agree?

## Ex 4: Infinitely Many Solutions

Solve $4 x+6=2(2 x+3)$

## Ex 5: No Solutions

Solve $4 x+6=2(2 x+7)$

Practice: Determine the number of solutions each equation has.
a. $t-27=-(27-t)$
b. $16(4-3 m)=96\left(-\frac{m}{2}+1\right)$
c. $11 v-3=4(v+5)$

