

11. If an equation is an identity then it simplifies to  $0 = 0$ , and there are an infinite number of solutions; Sample reasoning: substituting any number for all occurrences of the variable results in a true equation.
13. Answers may vary. Sample answer:  $x - 3 = x - 3$  ; It is an identity, so it has an infinite amount of solutions.
15. a. 8.  
b. no values  
c. any value except 8
17. -12
19.  $\frac{34}{9}$
21. 7
23. -3
25. -10
27. -5
29. no solution
31. -9
33. identity
35. -2
37. identity
39. 0.2
41. a.  $50 - 2d = 40 - 1.5d$  ; 20 30-day periods  
b. \$10
43. Answers may vary. Sample answer:  $p + 0.06p$  and  $1.06p$ ;  
 $p + 0.06p = (1 + 0.06)p = 1.06p$

- 45.**    **a.**    Company A:  $500 + 25g$ . Company B:  $200 + 30g$
- b.**    Company A; Cost for Company A is  $500 + 25(30) = \$1,250$  ; Cost for Company B is  $200 + 30(50) = \$1,700$  . So, A costs less.
- 47.**    48 ft
- 49.**    D