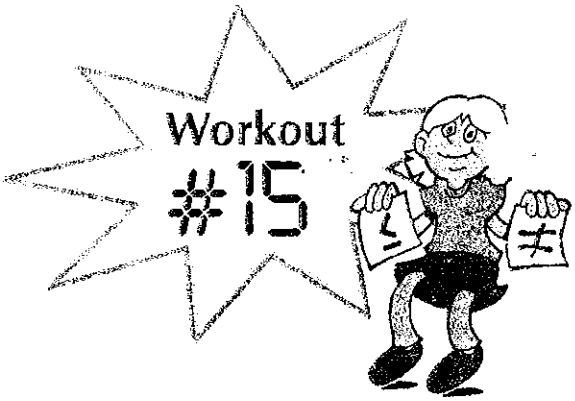
Variable on Both Sides

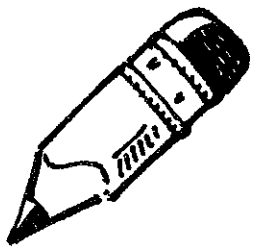


When solving equations with the variable on both sides, first simplify the equation by canceling out the variable on one side of the equation.

For example, in the equation "7x - 8 = 12 - 3x," we would want to cancel the "7x" or "-3x." It might be slightly easier to cancel the "-3x" by adding "3x" to both sides, leaving us with a 10x on one side. But it really doesn't matter; the choice is up to you as long as you cancel out one or the other.

Once you cancel out one of the variables, you can continue to solve the equation.

$$7x - 8 = 12 - 3x$$
$$7x + 3x - 8 = 12 - 3x + 3x$$
$$10x - 8 = 12$$
$$10x - 8 + 8 = 12 + 8$$
$$10x = 20$$
$$x = 2$$

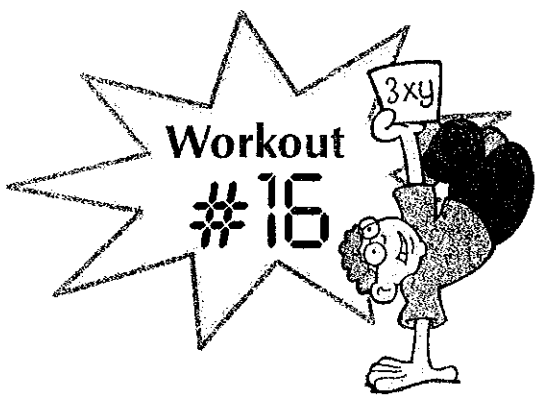


Now try these:

1. $8x - 3 = x + 18$

2. $-8y - 20 = 2y + 20$

Classical Music



Classical music refers to music that was composed during a certain period of time. Other music can have a classical style, but it isn't considered classical music unless it was composed during that period. Solve the equations below and put the resulting values of x in the designated places to reveal the period that is considered to be "classical."

____	____	0	____	—	____	____	____	0
(a)	(b)	(c)			(d)	(e)	(f)	

a. $x - 2 = -1$

b. $-x = -7$

c. $\frac{x}{5} = 1$

d. $-2 - x = -3$

e. $-3(2x - 9) = -21$

f. $x + 18 = 24 - 2x$