

1. Simplify the following expressions:

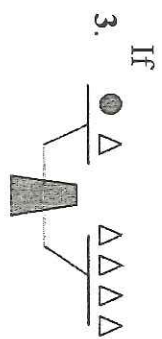
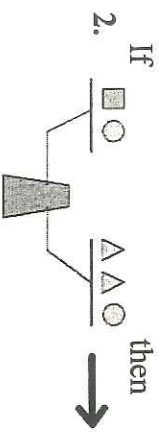
a.  $7y + 4 - 3y - 9$   
 $4y - 5$

b.  $1.2(0.8c + 2c)$   
 $.96c + 2.4c$

c.  $3w - 2(-4 + 5w)$   
 $3w + 8 - 10w$   
 $-7w + 8$

d.  $3 \frac{2w}{3.5} + \frac{2w}{3.5}$   
 $\frac{6w}{15} + \frac{10w}{15} = \frac{16w}{15}$

Check signs



Solve each equation; show your work and check for accuracy.

4.  $5 = a + \frac{1}{2}$   
 $-\frac{1}{2} \quad -\frac{1}{2}$   
 $4.5 = a$

5.  $\frac{x}{4} = 12 \cdot 4$   
 $\cdot 4$   
 $x = 48$

6.  $18.2 + b = 4.5$   
 $-18.2 \quad -18.2$   
 $b = -13.7$

7.  $7d = 9$   
 $\frac{7}{7} \quad \frac{7}{7}$   
 $d = \frac{9}{7}$  or 1.29  
 Round correctly?

8.  $1 - 7 = 18$   
 $+7 \quad +7$   
 $8 = 25$

9.  $4g - 12 = 24$   
 $+12 \quad +12$   
 $4g = 36$   
 $\frac{4g}{4} = \frac{36}{4}$   
 $g = 9$

10.  $6 = 9(h + 2)$   
 $6 = 9h + 18$   
 $-18 \quad -18$   
 $-12 = 9h$   
 $\frac{-12}{9} = \frac{9h}{9}$   
 $-\frac{4}{3}$  or  $-1.33 = h$

11.  $6 + n = 10, 7$   
 $\frac{7 \cdot 6 + n}{7} = 10, 7$   
 $6 + n = 70$   
 $-6 \quad -6$   
 $n = 64$

12.  $\frac{w}{6} - 1 = -8$   
 $+1 \quad +1$   
 $\frac{w}{6} = -7$   
 $\cdot 6 \quad \cdot 6$   
 $w = -42$

13.  $10k + 15 = 15$   
 $-15 \quad -15$   
 $\frac{10k}{10} = \frac{0}{10}$   
 $k = 0$   
 (not  $\emptyset$ , not  $\mathbb{R}$ )

14.  $3(2s + 8) = 24$   
 $6s + 24 = 24$   
 $-24 \quad -24$   
 $\frac{6s}{6} = \frac{0}{6}$   
 $s = 0$

15.  $4v - 2 + 8v = 6$   
 on same side  
 $12v - 2 = 6$   
 $+2 \quad +2$   
 $12v = 8$   
 $\frac{12}{12} \quad \frac{8}{12}$   
 $v = \frac{2}{3}$  or  $.67$

16.  $\frac{15r - 12}{3} = 9 \cdot 3$   
 $15r - 12 = 27$   
 $+12 \quad +12$   
 $15r = 39$   
 $\frac{15r}{15} = \frac{39}{15}$   
 $r = \frac{39}{15}$  or 2.6

17.  $2(z + 2) = z + 1 + z - 1$   
 $2z + 4 = 2z$   
 $-2z \quad -2z$   
 $4 = 0$  (no variable)  
 $\emptyset$

18.  $5x + 1 = 7x + 10$   
 $-5x \quad -5x$   
 $1 = 2x + 10$   
 $-10 \quad -10$   
 $-9 = 2x$   
 $\frac{-9}{2} = \frac{2x}{2}$   
 $x = -\frac{9}{2}$  or  $-4.5$

19.  $5 - 3w = 13 - w$   
 $+3w \quad +3w$   
 $5 = 13 + 2w$   
 $-13 \quad -13$   
 $-8 = 2w$   
 $\frac{-8}{2} = \frac{2w}{2}$   
 $-4 = w$

20.  $10 + 3x + 2 = x + 12 + 2x$   
 $12 + 3x = 3x + 12$   
 $-3x \quad -3x$   
 $12 = 12$   
 $\mathbb{R}$

21.  $6q - 4 + 8q - 2 = 20 + (6 - 4)$   
 (clean these sides up)  
 $14q - 6 = 22$   
 $+6 \quad +6$   
 $14q = 28$   
 $\frac{14q}{14} = \frac{28}{14}$   
 $q = 2$

22.  $12c - 8(5 - 2c) = 14 + c$   
 $12 - 40 + 16c = 14 + c$   
 $-28 + 16c = 14 + c$   
 $-c \quad -c$   
 $-28 + 15c = 14$   
 $+28 \quad +28$   
 $15c = 42$   
 $\frac{15}{15} \quad \frac{42}{15}$   
 $c = 2.8$  or  $\frac{14}{5}$

Great! Now you are prepared for a quiz tomorrow!

Quiz Today!