Test 14

1) $7^2 + 2^2 - 5 - 4 + 3X =$
$49 + 4 - 5 - 4 + 3X =$
$44 + 3X$

2) $X + 32 \div 4 - 2^2 =$
$X + 32 \div 4 - 4 =$
$X + 8 - 4 =$
$X + 4$

3) $-Y - 5 + Y + 2(2Y - Y) - 3 =$
$-Y - 5 + Y + 2(Y) - 3 =$
$2Y - 8$

4) $5X - 3 - X - 3(X + 1^2) =$
$5X - 3 - X - 3(X+1) =$
$5X - 3 - X - 3X - 3 =$
$X - 6$

5) $5(B + 3) = 4(B - 7) + 2B$
$5B + 15 = 4B - 28 + 2B$
$15 + 28 = 4B + 2B - 5B$
$43 = B$

6) $5((43) + 3) = 4((43) - 7) + 2(43)$
$5(46) = 4(36) + 2(43)$
$230 = 144 + 86$
$230 = 230$

7) $5^3 - 10^2 = X(8 - 2) + 2X - 3X$
$5^3 - 10^2 = 8X - 2X + 2X - 3X$
$125 - 100 = 8X - 2X + 2X - 3X$
$25 = 5X$
$5 = X$

8) $5^3 - 10^2 = (5)(8 - 2) + 2(5) - 3(5)$
$125 - 100 = 5(6) + 10 - 15$
$125 - 100 = 30 + 10 - 15$
$25 = 25$

9) $(-3)^2 + (8 + 3^2) = 2A$
$9 + (8 + 9) = 2A$
$9 + 17 = 2A$
$26 = 2A$
$13 = A$

10) $(-3)^2 + (8 + 3^2) = 2(13)$
$9 + 17 = 26$
$26 = 26$

11) $-(8 \times 8) = -64$

12) $2 \times 2 \times 2 = 8$

13) $-(4 \times 4) = -16$

14) $1 \times 1 \times 1 \times 1 \times 1 = 1$

15) $7\frac{8}{32} - 1\frac{12}{32} = 6\frac{40}{32} - 1\frac{12}{32} = 5\frac{28}{32} = 5\frac{7}{8}$

16) $8\frac{3}{3} - 2\frac{2}{3} = 6\frac{1}{3}$

17) $10\frac{9}{27} - 6\frac{15}{27} = 9\frac{36}{27} - 6\frac{15}{27} = 3\frac{21}{27} = 3\frac{7}{9}$

18) $5\frac{3}{4} - 3\frac{1}{2} = 5\frac{6}{8} - 3\frac{4}{8} = 2\frac{2}{8} = 2\frac{1}{4}$

19) $3X - 9 = 6(6) \div 4$
$3X - 9 = 36 \div 4$
$3X - 9 = 9$
$3X = 18$
$X = 6$

20) $72 \div 4 = 18$
$18 \times 3 = 54$ bought chocolate
$72 - 54 = 18$ didn't buy chocolate

Unit Test II

1) ± 6

2) $\pm R$

3) ± 8

4) $\pm\frac{3}{5}$

5) $4^2 - 3(5 - 2) - 25 + 6 =$
$16 - 3(3) - 25 + 6 =$
$16 - 9 - 25 + 6 = -12$

6) $13 + 49 \div 7 - 2^2 =$
$13 + 49 \div 7 - 4 =$
$13 + 7 - 4 = 16$

7) $(3 \times 6^2 - 1) + 11 =$
$(3 \times 36 - 1) + 11 =$
$(108 - 1) + 11 = 118$

8) $3(20 - 4^2) + 2 \times 3 =$
$3(20 - 16) + 6 =$
$3(4) + 6 = 12 + 6 = 18$

9) $3 + 10 - R + 6R = -3 + 9R + 5 - 5$
$13 + 5R = -3 + 9R$
$16 = 4R$
$4 = R$

10) $3+10-(4)+6(4)=-3+9(4)+5-5$
$13 - 4 + 24 = -3 + 36 + 5 - 5$
$33 = 33$

11) $(-3)^2 + (F + 3^2) = 2 \cdot 4 + 6$
$9 + (F + 9) = 8 + 6$
$F = 8 + 6 - 9 - 9$
$F = -4$

12) $(-3)^2 + ((-4) + 3^2) = 2 \cdot 4 + 6$
$9 + (-4 + 9) = 8 + 6$
$14 = 14$

13) $-3X + 4X = 2 \cdot 4 - X$
$X = 8 - X$
$2X = 8$
$X = 4$

14) $-3(4) + 4(4) = 2 \cdot 4 - (4)$
$-12 + 16 = 8 - 4$
$4 = 4$

15) $\frac{8}{16} = \frac{1}{2}$

16) $\frac{3}{16}$

17) $\frac{14}{16} = \frac{7}{8}$

18) $12^2 + 16^2 = H^2$
$144 + 256 = H^2$
$400 = H^2$
20 yds. $= H$

19) $L^2 + 9^2 = 15^2$
$L^2 + 81 = 225$
$L^2 = 144$
$L = 12$ ft.

20) $\frac{1}{2} \div \frac{1}{6} = \frac{1}{2} \times \frac{6}{1} = \frac{6}{2} = 3$

21) $\frac{7}{8} \div \frac{3}{4} = \frac{7}{\cancel{8}_2} \times \frac{\cancel{4}^1}{3} = \frac{7}{6} = 1\frac{1}{6}$

22) $\frac{5}{7} \div \frac{5}{9} = \frac{\cancel{5}}{7} \times \frac{9}{\cancel{5}} = \frac{9}{7} = 1\frac{2}{7}$

23) $3\frac{30}{48} + 2\frac{40}{48} = 5\frac{70}{48} = 6\frac{22}{48} = 6\frac{11}{24}$

24) $7\frac{3}{3} - 1\frac{1}{3} = 6\frac{2}{3}$

25) $9\frac{4}{40} - 5\frac{32}{40} = 8\frac{45}{40} - 5\frac{32}{40} = 3\frac{13}{40}$

26) $5^2 + 6^2 = 8^2$
$25 + 36 = 64$
$61 \neq 64$; no

27) $8N - 5 = 7N + 5$
$8N - 7N = 5 + 5$
$N = 10$

28) no