

Write as powers in simplest form:  
(4 pts. each)

1)  $2^2 \cdot 2^3 =$   $\boxed{2^5} = \underline{\underline{32}}$

2)  $(2^5)^2 =$   $\boxed{2^{10}} = \underline{\underline{1,024}}$

3)  $\frac{5^7 \cdot 5^2}{5^4 \div 5} =$   $\boxed{5^6} = \underline{\underline{15,625}}$

4)  $r^2 \cdot r^3 \cdot r^4 =$   $\boxed{r^9}$

5)  $t^{12} \div t^7 =$   $\boxed{t^5}$

6)  $(a^5 b^2)(a^{11} b^7) =$   $\boxed{a^{16} b^9}$

7)  $(-x^6)^5 =$   $\boxed{-x^{30}}$

8)  $(-x^5)^6 =$   $\boxed{+x^{30}}$

9)  $\frac{(-6x^2 y^3)}{(3x^3 y^2)} =$   $\boxed{\frac{-2y}{x}}$

10)  $(5a^2 b)^2 (abc)^3 =$   $\boxed{25a^7 b^5 c^3}$

Write the following expressions in simplest form:  
(5 pts. each)

11)  $x(y - x + 3) =$   $xy - x^2 + 3x$

12)  $2x(x - 5) =$   $2x^2 - 10x$

13)  $x^2y(x + y - xy) =$   $x^3y + x^2y^2 - x^3y^2$

14)  $(x + 2)(x + 3) =$   $x^2 + 5x + 6$

15)  $(b - 4)(b + 2) =$   $b^2 - 2b - 8$

16)  $(2x - 1)(3x + 2) =$   $6x^2 + x - 2$

17)  $(x - 3y)^2 =$   $x^2 - 6xy + 9y^2$

18)  $\frac{12x^2y^3}{3xy} =$   $4xy^2$

19)  $\frac{72r^2s^3t^4}{30rs^3t^5} =$   $\frac{2.4r}{t}$

20) On a sketch showing both axes...(for 15 points total)...PLOT and LABEL the following sets of rectangular coordinates.

$$\begin{matrix} \underline{6.0000}, & \underline{-5.0000}, & \underline{\sqrt{9.0000}}, & \underline{(-1.0000)^2}, & \underline{-1.0000}, & \underline{0.0000} \\ \underline{7.0000}, & \underline{-3.0000}, & \underline{4.5000}, & \underline{-1.0000/2.0000}, & \underline{4.0000}, & \underline{\sqrt{2.0000}} \end{matrix}$$

...and finally, plot and label points using successive numbers on each of the axes as ordered pairs. [ e.g.: (6.0000,7.0000) , (-5.0000,-3.0000) , etc ... ]

