Name _____ Date _____ Period _____

Using exponents on your calculator- use the special "EE" or "EXP" key!

You should have a scientific calculator that makes it easier to perform calculations with exponents. In order to do this, you use a special key labeled "EE" (for most TI calculators this is the 2nd function of the ",") or "EXP". This one key means "x·10 raised to the power" or "x 10 ^" Always use the EE or EXP key to enter a number in scientific notation! Never use the x 10 ^ keys to do scientific notation!

Thus, to enter 3×10^5 into the calculator (3 x 10 raised to the power 5) on a TI you would press only 4 keys: "3" "2nd" "EE" "5". On other calculators you may need only 3 keys!: "3" "EXP" "5".

After you complete the practice sheet according to the directions, retry a few of the problems using the EE or EXP key on your calculator… see how easy it is!

To practice… Do each of the following problems two ways…

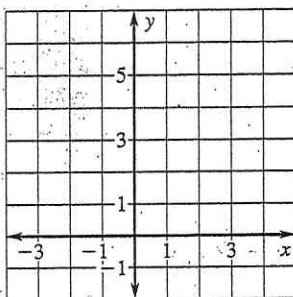| Problem	Problem by hand	Problem by calculator
$(4.2 \times 10^{-7}) \cdot (2.05 \times 10^{-9})$		
$(1.2 \times 10^{11}) \cdot (7.9 \times 10^{14})$		
$(1.32 \times 10^{-7}) \div (1.2 \times 10^{9})$		
$(4.2 \times 10^{7}) + (2.05 \times 10^{9})$		
$(9.81 \times 10^{12}) - (3.9 \times 10^{11})$		

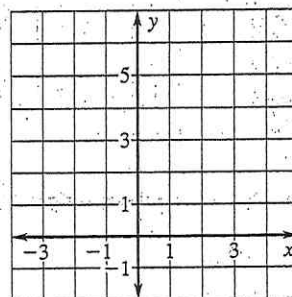**Practice A** continued
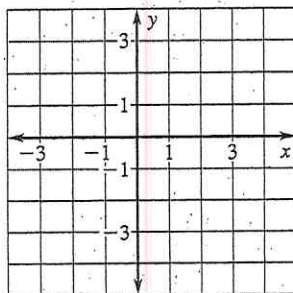For use with pages 520–527

12. $y = \left(\frac{7}{3}\right)^x$
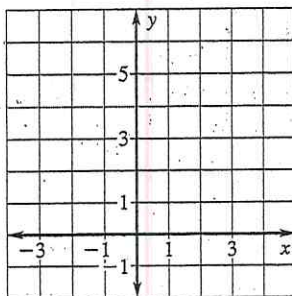
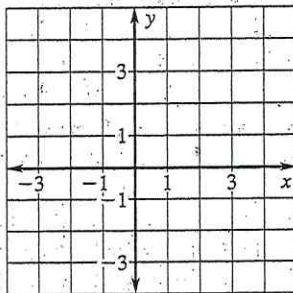**13.** $y = \left(\frac{5}{2}\right)^x$

14. $y = \left(\frac{7}{4}\right)^x$

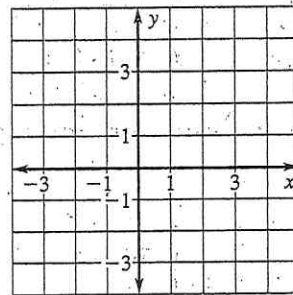**Graph the function. Compare the graph with the graph of $y = 4^x$.**

15. $y = -4^x$

16. $y = 3 \cdot 4^x$

17. $y = \frac{1}{4} \cdot 4^x$

In the growth model, identify the growth rate, the growth factor, and the initial amount.

18. $y = 3(1 + 0.05)^t$

19. $y = 2(1 + 0.25)^t$

20. $y = 0.1(1.75)^t$

21. **Investments** You deposit $200 in a savings account that earns 3% interest compounded yearly. Find the balance in the account after the given amounts of time.

    a. 1 year

    b. 2 years

    c. 5 years

22. **Grade Point Average** From Chad's freshman year to his senior year, his grade point average has increased by approximately the same percentage each year. Chad's grade point average in year t can be modeled by

$$y = 2\left(\frac{5}{4}\right)^t$$

where $t = 0$ corresponds to Chad's freshman year. Complete the table showing Chad's grade point average throughout his high school career.

Year, t	0	1	2	3
Grade point average	?	?	?	?