

# SUPERSTARS III

Saturn, XVII

Name: \_\_\_\_\_

(This shows my own thinking.)

- ★★ 1. Learn to use mental math to do these problems with a 1-digit divisor. When you turn in your paper, you will have a chance to do one like these and write your answer below.

$2 \overline{)10678}$

$3 \overline{)2145}$

$5 \overline{)2540}$

$6 \overline{)12018}$

$4 \overline{)2128}$

$7 \overline{)4949}$

Answer later: \_\_\_\_\_

- ★★ 2. Marcus drives a delivery truck and spent \$89 on gas his first week. If he drives for 8 months using about this much gas each week, how much would he spend on gas? Use estimation to find the answer to the nearest \$1000.



Answer: \_\_\_\_\_

- ★ 3. These numbers are examples of palindromic numbers.

232

11

505

325523

Find four other numbers that are palindromic.

Answer: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- ★ 4. What do the numbers above have in common with this sentence?

*A man, a plan, a canal, Panama!*

Answer: \_\_\_\_\_

- ★★ 5. Someone your age has an average pulse rate of 70 beats per minute and is ten years old. This means that, for an average person your age, the heart has already beat about how many times? Round your answer to the nearest hundred million.

Answer: \_\_\_\_\_

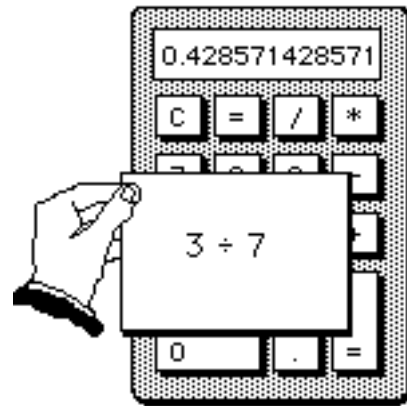
- ★★★ 6. Marcus noticed that at 3:00 o'clock, the hour and minute hands on his watch made a *right angle*. He was curious about the angles formed inside the right angle, when the second hand was pointing at the 2:00 o'clock marker. What two angles would this make inside the right angle?

Answer: \_\_\_\_\_ degrees and \_\_\_\_\_ degrees



- ★★★7. On a 12-digit calculator,  $3 \div 7$  will give the answer shown. The calculator can't show the division process any farther. But the digits continue to repeat in this manner.

- What will the 13th digit be? \_\_\_\_\_
- What will the 14th digit be? \_\_\_\_\_
- What will the 100th digit be? \_\_\_\_\_



- ★★7. When Bonita makes a fruit salad, she always uses oranges and watermelons. This time she has 11 pieces of fruit. If she uses at least one of each and more oranges than watermelons, show all possible combinations by filling in the chart below.



Oranges					
Watermelons					

- ★★★ 8. A bracelet cost \$33.50. The earrings cost \$12.65. How much does it cost to purchase the set if you get 10% off for buying both, and the sales tax is 6%?

Answer: \$\_\_\_\_\_