

SUPERSTARS III

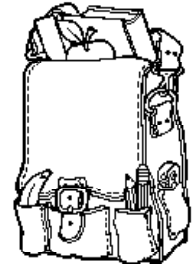
Pluto, XV

Name: _____

(This shows my own thinking.)

- ★★★★1. Six bookbags are randomly distributed to the six people who own them. What is the probability that all the people receive the correct bookbag?

Answer: _____



- ★★2. A waitress served \$800 worth of dinners at IHOP. She received \$95 in tips. How much less, in tips, did she receive than if she had received her expected rate of 15% of the cost of the meals?

Answer: \$_____

- ★★3. Jaime wants to know what grade to expect in science. Her chapter test scores for the quarter were 86, 97, 94, 73, and 88.

- a. What is Jaime's chapter test average?

Answer: _____

- b. If the final exam counts as two chapter tests, what must Jaime make on the final to average 90%, which is an "A" in this course.

Answer: _____



- ★★★★4. The U.S. Census taker stopped by the Busselbaum's home to survey their household. In trying to determine the number of children the Busselbaums have, the census taker received this information:

- *each daughter has the same number of brothers as she has sisters, and*
- *each of the boys has twice as many sisters as brothers.*

How many children do the Busselbaums have?

Answer: _____ children

★★5. Complete the next two terms in the pattern:

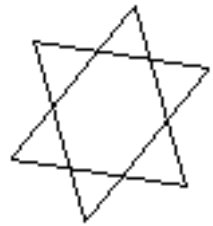
1, 2, 9, 64, 625, _____, _____

★6. Evaluate $6a + 5b - \frac{c^2}{3a}$ when $a = 4$, $b = 12$, and $c = 9$.

Answer: _____

★★★★7. A six-pointed regular star is formed by two interlocking equilateral triangles. What is the ratio of the area of the entire star to the area of one of the two large interlocking equilateral triangles?

Answer: _____



★★★8. Mr. Hudson has a box that is 18 cm wide by 36 cm long by 10 cm high. He also has some dice that are 3 cm by 3 cm by 3cm that he wants to store in this box. How many dice can he fit in the box, if he has to put the lid on securely?

Answer: _____ dice

★★★★9. Two joggers were crossing a railroad bridge when they suddenly heard the sound of an approaching train. They were smart enough to run for safety -- but each one ran in the opposite direction! Happily, each jogger reached his respective end of the bridge just in time to avoid the train.

If they were $\frac{2}{5}$ of the way across the bridge when they heard the train, and the train was going 50 miles per hour, and they both ran at the same speed, how fast did those two guys run?

Answer: _____ miles per hour

