

**ACT. #55 (CONT.: TUES)**

- 13** IF THE PROBABILITY OF GIVING BIRTH TO A GIRL IS 0.49, WHAT IS THE APPROXIMATE PROBABILITY OF GIVING BIRTH TO THREE CONSECUTIVE BOYS? (Round to the tenths place)
- 14** HOW MANY WAYS CAN 13 JUNIORS RUNNING FOR POSITIONS OF PRESIDENT, VICE PRESIDENT, AND SECRETARY BE SELECTED WHEN COMPARED TO 10 SOPHOMORES RUNNING FOR 6 IDENTICAL POSITIONS OF CLASS REPRESENTATIVES?
- 15** WHAT IS THE MIDDLE TERM FOR THE EXPANSION OF  $(X^2 + 3)^6$  ?
- 16** IF TEST SCORES ARE NORMALLY DISTRIBUTED HAVE A STANDARD DEVIATION OF 3 AND A MEAN OF 80, WHAT PERCENT OF THE SCORES FALL BETWEEN 77 AND 92?
- 17** FIND THE MEAN, MEDIAN, MODE, RANGE, STANDARD DEVIATION, AND VARIANCE FOR THE FOLLOWING NUMBERS: (USE THE CALCULATOR and round answers to the tenths place.)
- 33, 44, 12, 35, 67, 87, 85, 56, 45, 99, 76, 85, 46, 84
- 18** GIVEN  $A = 33^\circ$  ,  $B = 89^\circ$ , AND  $a = 5$ . Find the value of side  $c$ . (tenths place)
- 19** Given  $a = 12$ ,  $b = 15$ , and  $C = 55^\circ$ . Find side  $c$ . (tenths place)
- 20** Two airplanes leave an airport at the same time. An hour later they are 183 km apart. If one plane traveled 245 km and the other plane traveled 172 km during the hour, find the angle between the flights.
- 21** A tree is 24 meters high and casts a 13 meter shadow. Find the angle of elevation of the sun.
- 22** The angle of elevation from a boat to the top of a 130 meter hotel is  $18^\circ$ . How far is the boat from the base of the hotel?
- 23** Find the amplitude and period of this equation:  $y = -4 \cos 6x$
- 24** Find the common difference for 16, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, - 14 .