

- _____ 25. Find the minimum integer n for which $\frac{18}{n+1}$ is an integer.
- _____ 26. The sum of the square roots of two positive integers is 5. If the two integers differ by 5, what are the integers?
- _____ 27. A worm crawls 7.5 inches in 80 seconds. What is its speed in feet per hour?
- _____ 28. By how much is $(3x - 5)(x + 2)$ greater than $(x + 4)(2x - 1)$?
- _____ 29. A game consists of drawing a number from 1 to 20. A player wins if the number drawn is either a prime number or a perfect square. What is the probability of winning in this game?
- _____ 30. The number of boys in a class is equal to the number of girls. Nine boys are absent today, and this leaves twice as many girls as boys in the classroom. How many students belong to the class?
- _____ 31. A square region is removed from a rectangular region. Which of the following can be true?
 (a) The perimeter is decreased.
 (b) The perimeter is not changed.
 (c) The perimeter is increased.
- _____ 32. A bag contains 5 black, 5 red, 6 blue, 6 green, 7 white, 8 yellow, and 10 orange beads. At least how many beads must be drawn from the bag to ensure that at least 3 beads of the same color are chosen?
- _____ 33. How many positive numbers less than 1000 are divisible by 6 but not by 5?
- _____ 34. A 4 cm \times 5 cm \times 7 cm rectangular prism is painted on all faces. If the prism is cut into 1 cm \times 1 cm \times 1 cm cubes, how many cubes do not have paint on any of its sides?
- _____ 35. Andrew is 5 years old and Charlie is 26. In how many years will Charlie be $2\frac{1}{2}$ times as old as Andrew?
- _____ 36. A car is driving along a highway at 55 kph. The driver notices a bus, $\frac{1}{2}$ km behind. The bus passes the car one minute later. What was the speed of the bus?
- _____ 37. With what polynomial must $8x^5 - 10x^3 + 2x + 5$ be divided to get a quotient of $4x^2 - 3$ and a remainder of $5 - x$?
- _____ 38. The volume of a sphere is equal to its surface area. What is the diameter of the sphere?
- _____ 39. If $3A54B10$ is divisible by 330, what are the values of A and B ?
- _____ 40. Find the solution set: $|5 - 2x| < 19$.
- _____ 41. If $47A2969$ is equal to the square of $3(721 + A)$, find the digit A .
- _____ 42. Consider the sequence 1, 2, 2, 3, 3, 3, 4, 4, 4, 4, 5, 5, 5, 5, ... How many numbers in the sequence are needed so that the sum of the reciprocals is 100?
- _____ 43. If n is a positive odd integer, which of the following is a perfect square: $2n^2$, $25(3^{n+2})$, $7^{n(n+1)}$?
- _____ 44. The sum of the first 50 odd integers is 2500. What is the sum of the next 50 odd integers?
- _____ 45. Felix has an average of 90 in five tests, each test with 100 points. What is the lowest possible score Felix could have gotten in a test?
- _____ 46. In square $ABCD$, P is the midpoint of AB and Q is the midpoint of BC . What percent of the area of $ABCD$ is the area of $\triangle PQD$?
- _____ 47. If $1 < x < 9/8$, which is bigger, $\sqrt[3]{3x}$ or $\sqrt{2x}$?
- _____ 48. Find the least positive integer that leaves remainders of 1, 2, and 3 when divided by 3, 5, and 7, respectively.
- _____ 49. Find all points x on the real number line such that the sum of the distances from x to 4 and from x to -4 is 12.
- _____ 50. If $11n$ leaves a remainder of 6 when divided by 7, what is the remainder when $5n$ is divided by 7?