

12. 1 out of 11 = $1/11$

18. (Area of large square - Area of small square) / Total Area

$$(5 \times 5 - 3 \times 3) / (5 \times 5) = (25 - 9) / 25 = 16/25 = .64$$

20. Area of 4 circles / Area of square = $4 \pi(3)^2 / (12 \times 12) = 36 \pi / 144 = \pi / 4 = .79$

26. $MN = 0.3 \times 20 = 6$

30. $P = 3.7 / 65.7 = .06$

36. $P(x > 10) = 0$

42. a. Yes, $a + b > c$; $3 + 3 > 4$

b. No, $a + b$ not $> c$; $4 + 1$ not > 5

c. The cut would have to fall between 1 in. and 5 in., not including either of them, which is less than $4/6 = 2/3 = .67$

46. Area of shading = (Area of square - area of 4 circles) = $4 \times 4 - 4 \times \pi(1)^2 = 16 - 4 \pi$

Prob. of hitting shading = Area of shading / total area = $(16 - 4 \pi) / 16 = .21$ which would be answer A - 21%

48. $\frac{2}{x+2} = \frac{4}{3x}$ $6x = 4x + 8$ $2x = 8$ $x = 4$ which is answer D