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| Y12/1. Evaluate 88 + 88 x 88 -88 = |
| Y12/2. Simplify |
| Y12/3 Mrs. Fisher is buying garden lime, which she will sprinkle onto her flower garden. One handful of lime covers 2 square meters of the garden. Her garden is circular with a circumference of 44 m. How many handfuls of lime should she sprinkle to cover the whole area? (Use π = ) |
| Y12/4 What is the area of the triangle with vertices (1, 2), (4, 2), and (4, 6)? |

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| Y12/5 Calculate the area of the shaded region. (AC is 20cm, AB is 16cm, Use ) |
| Y12/6. The gross profit rate an item is 10% of the selling price and the operating expenses are 7.2% of the selling price. What percent of the cost are the operating expenses? |
| Y12/7. A password of 6 digits is made of digits 926002. How long would it take to try all possible passwords if trying one password takes 5 seconds? |
| Y12/8. The names of four directors of a company, A, B,C and D will be placed in a hat and a two member delegation will be selected at random to represent the company at an international meeting. What is the probability that A or B is selected? |

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| Y12/9. Sweet delight candies sell boxes of candy consisting of creams caramels. Each box sells for $6.00 and holds 40 piece of candy. If the caramel cost ten cents to produce and the cream cost twenty cent to produce, how many caramels should be in each box for no profit or no loss. |
| Y12/10. Find the value of  so that  is perpendicular to the line . |
| Y12/11.The probability that John coming to school on time is 3/8 and Peter coming to school is 5/7. Assuming the events are independent, find the probability that only one of them coming to school on time? |
| Y12/12.A freight trains starts from point A and heads for point B at 40 km/hr. Two hours later a passenger train leaves the same station for point B travelling at 60km/hr. How long before the passenger train overtakes the freight train? |

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| Y12/13. A circle is inscribed inside an equilateral triangle so that each side of the triangle is tangent to circle. If the triangle has area of , find the area of the circle ? |
| Y12/14. Compute the exact value of the infinite series: |
| Y12/15. A person starting with $$64$ and making $6$ bets, wins three times and loses three times, the wins and losses occurring in random order. The chance for a win is equal to the chance for a loss. If each wager is for half the money remaining at the time of the bet, what is the final result. |
| Y12/16. A circle of 1 unit has an equilateral triangle PQR inscribed in it.    The points S and T are points on the circle such that QRST is a rectangle. What is the area of the rectangle? |

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| Y12/17. Four years ago, Marina was three times older than her daughter. Six years from now, Marina will be twice as old as her daughter. What is the present age of Marina? |
| Y12/18. Albert and Kaite are painting a room. Kaite paints half the room red. Albert paints half of the unpainted area blue. Kaite paints half of the unpainted area red and so on. If this process continues infinitely, what fraction of the room will be painted red? |
| Y12/19. Solve the equation for x: |
| Y12/20. In a three game series with just two teams, Team A and Team B, the chance that Team A wins the game is one-third so what is the probability that Team A will win at least two games? |