AP POLYCET 2026 Mathematics Answer Key

| Question Text | Answer Detail |
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| The length of the shadow of a vertical pole is 3 times its original length. The angle of elevation to the Sun is | 30∘ |
| One card is drawn from a well-shuffled deck of 52 cards. Find the probability of getting the queen of diamonds. | 1/52 |
| From the letters of the word 'MOBILE', a letter is selected. The probability that the letter is a vowel, is | 1/2 |
| The probability of getting a bad apple in a box of 400 apples is 0.035. The total number of bad apples is | 14 |
| If P(E)=0.05, the probability of 'not E' is | 0.95 |
| Based on the table provided, the mean literacy rate in percentage of 35 cities is | 69.43 |
| For the survey of 20 households, the mode of the family size data is | 3.286 |
| From the distribution of weights of 30 students, the median class of the data is | 55-60 |
| The median of scores 1.6, 1.3, 1.7, 1.2, 1.4, 1.02 and 1.35 is | 1.35 |
| The sum of L.C.M. and H.C.F. of 12, 21 and 15 is | 423 |

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| The number of rational numbers that exist between any two distinct real numbers is | ∞ |
| The smallest irrational number by which 18 should be multiplied so as to get a rational number is | 2 |
| The decimal expansion of 101/99 is | 1.02 |
| If the product of zeroes of the polynomial f(x)=ax3−6x2+11x−6 is 4, then a= | 3/2 |
| If one of the zeroes of the quadratic polynomial f(x)=kx2+3x+k is 2, then the value of k is | −6/5 |
| If 2 and 1/2 are the zeroes of P(x)=px2+5x+r, then which of the following is true? | p=r=−2 |
| The pair of lines ax+2y=9 and 3x+by=18 represent parallel lines, where a and b are integers if | ab=6 |
| The system of equations x=0 and y=3 has | a unique solution |
| Half the perimeter of a rectangular garden, whose length is 4 m more than its width, is 36 m. Then the dimensions of the garden are | 20 m, 16 m |
| The solution of the equations 2x+3y−4=0 and 3x+4y+1=0 is | x=−19,y=14 |
| If the equation x2+4x+k=0 has real and distinct roots, then | k<4 |
| A pole at the boundary of a circular park of diameter 13m. Difference of distances from two diametrically opposite gates A and B is 7m. Distances from A and B are | 5, 12 |

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| The quadratic equation, whose one of the roots is 3+5, is | x2−6x+4=0 |
| Which of the following is a quadratic equation? | (x+1)2=2(x−3) |
| The next term of the A.P. 2, 7, 12, ... is | 17 |
| Ratio of 18th and 11th term of an A.P. is 3:2, then the ratio of the 21st term to the 5th term is | 3 : 1 |
| The sum of first 16 terms of the A.P. 10, 6, 2, ..... is | -352 |
| The distance between the two points P(2,tanα) and Q(3,0) is | secα |
| The mid-point of the line segment joining the points (5, 3) and (-3, 11) is | (1, 7) |
| If x<0 and y>0, then (x,y) lies in ____ quadrant. | 2nd |
| The y-axis divides the join of (5, 7) and (-1, 3) in the ratio | 5 : 1 |
| The perimeter of the triangle whose vertices are (0, 0), (1, 0) and (0, 1) is | 2+2 |
| In the figure, LM∥AB,AL=x−3,AC=2x,BM=x−2,BC=2x+3, then x= | 9 |
| ΔABC∼ΔDEF,AB=3cm,BC=2cm,CA=2.5cm. If EF=4cm, then perimeter of ΔDEF is | 15 cm |
| In the given figure (triangle with angles 70∘ and 65∘), x= | 135∘ |
| Two poles of height 6 m and 11 m stand vertically 12 m apart. The distance between their tops is | 13 m |

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| Length of tangent from a point 15 cm away from the centre of a circle of radius 9 cm is | 12 cm |
| The lengths of tangents drawn from an external point to a circle are | equal |
| Length of minute hand is 14 cm. Area swept by the minute hand in 5 minutes is | 154 / 3 |
| The circumference of two circles are in the ratio 2 : 3, the ratio of their surface area is | 4 : 9 |
| Toy: cone on hemisphere. Diameter 7 cm, slant height 4 cm. Total surface area is | 121 cm2 |
| Ratio of volumes of cone, cylinder and hemisphere with same base, radius and height is | 1 : 3 : 2 |
| Sphere (S.A. 48 cm2) bisected into two hemispheres. Total S.A. of one hemisphere is | 36 |
| If cscθ=2 and cotθ=3a, then the value of a is | 1 |
| If cos(A−B)=1/2 and sinB=1/2, then A= | 105∘ |
| If cosθ=bb2−a2, then sinθ= | a/b |
| If cscθ+cotθ=k, then cosθ= | k2+1k2−1 |