

# Math One Marks – JSON Format (REAL 40 QUESTIONS)

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    "title": "Math One Marks",  
    "subject": "Mathematics",  
    "class": "10",  
    "type": "MCQ",  
    "markPerQuestion": 1,  
    "totalQuestions": 40,  
    "questions": [  
        {  
            "id": 1,  
            "question": "If  $n(A) = 6$  and  $B = \{1, 3\}$ , then  $n(A \setminus B)$  is",  
            "options": [  
                "6",  
                "12",  
                "18",  
                "3"  
            ],  
            "answer": 1  
        },  
        {  
            "id": 2,  
            "question": "If two ordered pairs  $(x, y)$  and  $(2, \u22122)$  are equal, then  $(x, y)$  is",  
            "options": [  
                "(5, 1)",  
                "(2, \u22122)",  
                "(2, 3)",  
                "(3, \u22122)"  
            ],  
            "answer": 1  
        },  
        {  
            "id": 3,  
            "question": "The number of relations from a set with 2 elements to a set with 3 elements is",  
            "options": [  
                "6",  
                "8",  
                "64",  
                "9"  
            ],  
            "answer": 2  
        },  
        {  
            "id": 4,  
            "question": "A function which maps every element to itself is called",  
            "options": [  
                "One\u2013one",  
                "Onto",  
                "Identity",  
                "Many\u2013one"  
            ],  
            "answer": 2  
        },  
        {  
            "id": 5,  
            "question": "If a function is both one\u2013one and onto, it is called",  
            "options": [  
                "Identity",  
                "Bijective",  
                "Into",  
                "Constant"  
            ],  
            "answer": 1  
        },  
        {  
            "id": 6,  
            "question": "The HCF of the least prime number and the least composite number is",  
            "options": [  
                "1",  
                "2",  
                "3",  
                "4"  
            ]  
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    ]  
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],
"answer": 1
},
{
"id": 7,
"question": "The remainder when the cube of any integer is divided by 9 is",
"options": [
"0, 1, 8",
"1, 4, 8",
"0, 3, 6",
"2, 5, 7"
],
"answer": 0
},
{
"id": 8,
"question": "The 10th term of an A.P. with first term 1 and common difference 4 is",
"options": [
"36",
"37",
"40",
"41"
],
"answer": 1
},
{
"id": 9,
"question": "The number of terms in the G.P. 5, 20, 80, \u2026 , 20480 is",
"options": [
"6",
"7",
"8",
"9"
],
"answer": 1
},
{
"id": 10,
"question": "The sum of the first n natural numbers is",
"options": [
" $n^2$ ",
" $n(n+1)$ ",
" $n(n+1)/2$ ",
" $n^2/2$ "
],
"answer": 2
},
{
"id": 11,
"question": "A system of linear equations is inconsistent if the lines",
"options": [
"intersect at one point",
"intersect at two points",
"are parallel",
"coincide"
],
"answer": 2
},
{
"id": 12,
"question": "The graph of a linear polynomial is a",
"options": [
"Circle",
"Parabola",
"Straight line",
"Hyperbola"
],
"answer": 2
},
{
"id": 13,
"question": "The number of zeroes of a quadratic polynomial is at most",
"options": [
"1",
"2",
"3"
]
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"3",
"0"
],
"answer": 1
},
{
"id": 14,
"question": "The discriminant of the equation  $x^2 - 4x + 4 = 0$  is",
"options": [
"0",
"4",
"8",
"16"
],
"answer": 0
},
{
"id": 15,
"question": "The order of a matrix with 3 rows and 2 columns is",
"options": [
"2 \u00d7 3",
"3 \u00d7 2",
"3 \u00d7 3",
"2 \u00d7 2"
],
"answer": 1
},
{
"id": 16,
"question": "Two triangles are similar if their corresponding angles are",
"options": [
"equal",
"supplementary",
"right angles",
"unequal"
],
"answer": 0
},
{
"id": 17,
"question": "The ratio of the areas of two similar triangles is equal to",
"options": [
"ratio of sides",
"square of ratio of sides",
"cube of ratio of sides",
"ratio of heights"
],
"answer": 1
},
{
"id": 18,
"question": "The angle between a tangent and radius at the point of contact is",
"options": [
"0\u00b0",
"45\u00b0",
"90\u00b0",
"180\u00b0"
],
"answer": 2
},
{
"id": 19,
"question": "The number of tangents drawn from an external point to a circle is",
"options": [
"1",
"2",
"3",
"Infinite"
],
"answer": 1
},
{
"id": 20,
"question": "The distance between the tops of two poles of heights 6 m and 11 m standing 12 m apart is",
"options": [

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"13 m",
"14 m",
"15 m",
"12 m"
],
"answer": 2
},
{
"id": 21,
"question": "The distance between the points (0,0) and (3,4) is",
"options": [
"4",
"5",
"6",
"7"
],
"answer": 1
},
{
"id": 22,
"question": "The slope of a line parallel to the x-axis is",
"options": [
"1",
"\u22121",
"0",
"\u221e"
],
"answer": 2
},
{
"id": 23,
"question": "The equation of a line parallel to the y-axis is",
"options": [
"y = mx + c",
"x = a",
"y = a",
"ax + by = 0"
],
"answer": 1
},
{
"id": 24,
"question": "Three points are collinear if the area of the triangle formed by them is",
"options": [
"maximum",
"minimum",
"zero",
"non-zero"
],
"answer": 2
},
{
"id": 25,
"question": "The slope of a line perpendicular to a line of slope m is",
"options": [
"m",
"\u2212m",
"1/m",
"\u22121/m"
],
"answer": 3
},
{
"id": 26,
"question": "The value of  $\sin 30^\circ$  is",
"options": [
"0",
"1",
"1/2",
"\u22121/2"
],
"answer": 2
},
{
"id": 27,
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"question": "If tan \u03b8 = 1, then \u03b8 is",
"options": [
"30\u00b0",
"45\u00b0",
"60\u00b0",
"90\u00b0"
],
"answer": 1
},
{
"id": 28,
"question": "The angle of elevation when the height and shadow are equal is",
"options": [
"30\u00b0",
"45\u00b0",
"60\u00b0",
"90\u00b0"
],
"answer": 1
},
{
"id": 29,
"question": "The value of  $\sin 60^\circ + \cos 60^\circ$  is",
"options": [
"0",
"1",
"2",
"1/2"
],
"answer": 1
},
{
"id": 30,
"question": "If  $\sin \theta = 0$ , then \u03b8 is",
"options": [
"0\u00b0",
"30\u00b0",
"45\u00b0",
"60\u00b0"
],
"answer": 0
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"id": 31,
"question": "The curved surface area of a cylinder is",
"options": [
"2\pi r^2",
"\pi r^2 h",
"2\pi r h",
"\pi r h"
],
"answer": 2
},
{
"id": 32,
"question": "The volume of a cone is",
"options": [
"\pi r^2 h",
"1/3 \pi r^2 h",
"2\pi r h",
"\pi r^2 h"
],
"answer": 1
},
{
"id": 33,
"question": "The total surface area of a sphere is",
"options": [
"2\pi r^2",
"3\pi r^2",
"4\pi r^2",
"6\pi r^2"
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"answer": 2
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{  
  "id": 34,  
  "question": "If the radius of a sphere is doubled, its volume becomes",  
  "options": [  
    "2 times",  
    "4 times",  
    "6 times",  
    "8 times"  
  ],  
  "answer": 3  
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{  
  "id": 35,  
  "question": "The shape of a shuttle cock is",  
  "options": [  
    "Cone and sphere",  
    "Cylinder and cone",  
    "Hemisphere and cone",  
    "Sphere and cylinder"  
  ],  
  "answer": 2  
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{  
  "id": 36,  
  "question": "The range of the data 5, 5, 5, 5, 5 is",  
  "options": [  
    "0",  
    "5",  
    "1",  
    "10"  
  ],  
  "answer": 0  
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{  
  "id": 37,  
  "question": "The sum of deviations of observations from their mean is",  
  "options": [  
    "positive",  
    "negative",  
    "zero",  
    "non-zero"  
  ],  
  "answer": 2  
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{  
  "id": 38,  
  "question": "The probability of a sure event is",  
  "options": [  
    "0",  
    "1",  
    "1/2",  
    "\u22121"  
  ],  
  "answer": 1  
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{  
  "id": 39,  
  "question": "The probability of an impossible event is",  
  "options": [  
    "1",  
    "0",  
    "\u22121",  
    "1/2"  
  ],  
  "answer": 1  
,  
{  
  "id": 40,  
  "question": "If a coin is tossed once, the probability of getting a head is",  
  "options": [  
    "0",  
    "1",  
    "1/2",  
    "1/4"  
  ],
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"answer": 2
}
]
}
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