1.The equations of the lines x=2 & y=4 meet at the point .............

The equation �=2*x*=2 represents a vertical line passing through the point (2,0)(2,0), and the equation �=4*y*=4 represents a horizontal line passing through the point (0,4)(0,4).

The point where these two lines intersect is the point where the �*x*-coordinate is 2 (from the vertical line) and the �*y*-coordinate is 4 (from the horizontal line). Therefore, the point of intersection is (2,4)(2,4).

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2. Equations 2X+3Y=9 & 7X+9Y=-6 have how many solutions?

To determine the number of solutions for the system of equations 2�+3�=92*X*+3*Y*=9 and 7�+9�=−67*X*+9*Y*=−6, you can use the concept of linear equations.

One way to analyze this is to check if the two equations represent parallel lines, intersecting lines, or coincide. The system has:

2�+3�=92*X*+3*Y*=9 7�+9�=−67*X*+9*Y*=−6

You can manipulate the equations to see if they are proportional:

Multiply the first equation by 3 and the second equation by -1 to make the coefficients of �*Y* the same:

6�+9�=276*X*+9*Y*=27 −7�−9�=6−7*X*−9*Y*=6

Now, add the two equations:

6�+9�+(−7�−9�)=27+66*X*+9*Y*+(−7*X*−9*Y*)=27+6

This simplifies to:

−�=33−*X*=33

Now, multiply through by -1 to solve for �*X*:

�=−33*X*=−33

Substitute this value back into one of the original equations, let's use the first one:

2(−33)+3�=92(−33)+3*Y*=9

This simplifies to:

−66+3�=9−66+3*Y*=9

Now, solve for �*Y*:

3�=753*Y*=75

�=25*Y*=25

So, the solution to the system is �=−33*X*=−33 and �=25*Y*=25.

Therefore, the system of equations has a unique solution, and the two lines represented by these equations intersect at the point (−33,25)(−33,25).

3. Equation 7x+9y=-5 has how many keys?

It seems like there might be a typo in your question, and you meant to ask about the number of solutions to the equation 7�+9�=−57*x*+9*y*=−5.

This equation represents a linear equation in two variables, �*x* and �*y*. The number of solutions to such an equation depends on the relationship between the coefficients of �*x* and �*y*. In this case, the equation has a unique solution for every pair of �*x* and �*y* that satisfies the equation.

So, the equation 7�+9�=−57*x*+9*y*=−5 has exactly one solution for �*x* and �*y*, and there is a unique point that satisfies the equation. It doesn't have infinitely many solutions or no solution.

4. Equation ax^2+bx+c=0 will be ............. for a=b=c=0

If �=�=�=0*a*=*b*=*c*=0, then the equation ��2+��+�=0*ax*2+*bx*+*c*=0 becomes 0�2+0�+0=00*x*2+0*x*+0=0, which simplifies to 0=00=0.

This is a trivial identity, and it is always true, regardless of the value of �*x*. In this case, the equation doesn't represent a quadratic equation but rather a constant equation. The solution to this equation is all real numbers (�*x* can be any real number), because any real number substituted into the equation will satisfy the identity 0=00=0.

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5. Income of A & B is in ratio 2:3. For example, if B’s income is Rs 3000, find

out the ratio of their expenditures if their savings are Rs 500 & Rs 700,

respectively.

Let's denote the incomes of A and B as ��*IA*​ and ��*IB*​, and their expenditures as ��*EA*​ and ��*EB*​. Given that the incomes are in the ratio 2:3 and B's income (��*IB*​) is Rs 3000, we can express A's income (��*IA*​) as follows:

��:��=2:3*IA*​:*IB*​=2:3

This implies that ��*IA*​ is 2/32/3 of ��*IB*​. Therefore:

��=23×��*IA*​=32​×*IB*​

Given that ��=��3000*IB*​=*Rs*3000, we can substitute this value to find ��*IA*​:

��=23×3000=��2000*IA*​=32​×3000=*Rs*2000

Now, we are given their savings:

��=��500*SA*​=*Rs*500 ��=��700*SB*​=*Rs*700

The savings are the differences between incomes and expenditures:

��=��−��*SA*​=*IA*​−*EA*​ ��=��−��*SB*​=*IB*​−*EB*​

We can rearrange these equations to find the expenditures:

��=��−��*EA*​=*IA*​−*SA*​ ��=��−��*EB*​=*IB*​−*SB*​

Substitute the values we found:

��=2000−500=��1500*EA*​=2000−500=*Rs*1500 ��=3000−700=��2300*EB*​=3000−700=*Rs*2300

Now, we can find the ratio of their expenditures:

Ratio of expenditures (��:��)=1500:2300Ratio of expenditures (*EA*​:*EB*​)=1500:2300

To simplify this ratio, you can divide both sides by 100:

15:2315:23

So, the ratio of their expenditures is 15:23.

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