Basic Equations - Online Quiz

Following quiz provides Multiple Choice Questions (MCQs) related to **Basic Equations**. You will have to read all the given answers and click over the correct answer. If you are not sure about the answer then you can check the answer using **Show Answer** button. You can use **Next Quiz** button to check new set of questions in the quiz.

Q 1 - The arrangement of x/2+ y/9 = 11 and x/3 + y/6 =9 are:

A - x=36, y=9

B - x=9, y=9

C - x=18, y=18

D - x=18, y=9

Answer : C

Explanation

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The given equations are
9x+ 2y = 198...(i)
2x+y =54...(iii)
On multiplying (ii) by 2 and subtracting it from (i), we get: 5x= 90 ⇒x= 18
Putting x=18 in (ii), we get: 36+y = 54 ⇒y = 18
∴x = 18, y= 18
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Show Answer

Q 2 - On solving 4/x+5y=7 and 3/x+4y =5 we, get:

A - x=1/3, y=1

B - x=- 1/3, y=-1

C - x=1/3, y=-1

D - x=- 1/3, y=1

Answer : C

Explanation

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Given equations are 4/x+5 y= 7 ...(i)
3/x+4y = 5  ...(ii)
On multiplying (i) by 3, (ii) by 4 and subtracting, we get -y =1 ⇒y= -1
Putting y= -1 in (i), we get 4/x-5 = 7 ⇒4/x= 12 ⇒12x= 4 ⇒x= 1/3
∴x= 1/3, y= -1
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Hide Answer

Q 3 - If 3x+7y= 75 and 5x-5y= 25, then what is the estimation of x+y?

A - 14

B - 15

C - 16

D - 17

Answer : D

Explanation

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Given 3x+7y = 75  ...(i)
5x-5 y= 25 ⇒x-y = 5...(ii)
Multiplying (ii) by 7 and adding to (i), we get:
10 x = 110   ⇒x = 11
Putting x = 11 in (ii), we get: y=(11-5) = 6
∴ x+y = (11+6) = 17
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Hide Answer

Q 4 - On solving p/x+q/y = m, q/x+p/y = n, we get:

A - $x=(q^2-p^2)/(mp-nq)$, $y = (q^2-p^2)/(np-mq)$

B - $x=(p^2-q^2)/(mp-nq)$, $y=(p^2-q^2)/(np-mq)$

C - $x=(p^2-q^2)/(mp-nq)$, $y= (q^2-p^2)/(np-mq)$

D - $x=(q^2-p^2)/(mp-nq)$, $y = (p^2-q^2)/(np-mq)$

Answer : B

Explanation

Given equations are $p/x+q/y = m...(i)$, $q/x+ p/y = n ...(ii)$
On multiplying (i) by q, (ii) by p and subtracting, we get:
$q^2/y- p^2/y = mq-np$
$\Rightarrow y (mp-np) = (q^2- p^2)$
$\Rightarrow y = (q^2-p^2)/(mq- np)$
$= (p^2- q^2)/(np-mq)$
On multiplying (i) by p, (ii) by q and subtracting, we get:
$p^2/x - q^2/x = mp- nq$
$\Rightarrow (p^2- q^2) = x (mp- nq)$
$\Rightarrow x = (p^2- q^2)/ (mp-nq)$
$\therefore x= (p^2-q^2)/(mp-nq)$, $y = (p^2-q^2)/(np- mq)$

Show Answer

Q 5 - On the off chance that 2a+3 b= 17 and 2a+2-3b+1= 5 then:

A - a=2, b=3

B - a=-2, b=3

C - a=2, b=-3

D - a=3, b=2

Answer : D

Explanation

Given equation are 2a +3b = 17 ...(i)
$2a*2^{2}- 3b*3^{i}= 5 \Rightarrow 4*2a- 3*3b= 5$ ...(ii)
Putting 2a = x and 3b= y, we get:
x+y= 17 ...(iii) 4x-3y = 5...(iv)
Multiplying (iii) by 3 and adding (iv) to it, we get: 7x= 56
⇒x= 8
Putting x= 8 in (iii), we get: 8+ y = 17 ⇒y = 9
∴ $(2a= 8 = 2^{3} \Rightarrow a = 3)$ and $(3b= 9= 3^{2} \Rightarrow b= 2)$
∴ a= 3, b= 2

Hide Answer

Q 6 - On the off chance that x+1/y= 5, 2x+ 3/y= 13, then (2x-3y) =?

A - 1

B - 2

C - 3

D - 5

Answer : C

Explanation

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X+1/y = 5...(i),     2x+3/y =13 ...(ii)
On multiplying (i) by 3 and subtracting (ii) from it, we get: x=2
Putting x= 2 in (i), we get 1/y =3 ⇒3y= 1 ⇒y = 1/3
∴ (2x-3y) = (2*2-3*1/3) = (4-1) = 3
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Hide Answer

Q 7 - The arrangement of 2x+3y=2 and 3x+2y =2 can be spoken to by a point in the direction plane in:

A - First quadrant

B - second quadrant

C - third quadrant

D - fourth quadrant

Answer : A

Explanation

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2x+3y = 2...(i) , 3x+2y= 2...(ii)
Multiplying (i) by 2 and (ii) by 3 and subtracting, we get: -5x= -2 ⇒x= 2/5
Putting x= 2/5 in (i), we get 4/5+3y= 2 ⇒3y = (2-4/5) = 6/5 ⇒y = 6/5*1/3 =2/5
∴ the solution can be represented by a point (2/5, 2/5) which lies in 1st quadrant.
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Hide Answer

Q 8 - The arrangement of mathematical statements 2x+ħy= 11 and 5x-7y = 5 have no arrangement when:

A - ħ= 13/5

B - ħ=-13/5

C - ħ=-14/5

D - ħ=-16/5

Answer : C

Explanation

For no solution , we have $a_1/a_2 = b_1/b_2 \neq c_1/c_2$

i.e. $2/5 = ħ/-7 \neq 11/5 \Rightarrow ħ= -14/5$

Hide Answer

Q 9 - The arrangement of comparisons x+2y = 3 and 2x+ 4y = 3 have:

A - Precisely two arrangement

B - no arrangement

C - limitlessly numerous arrangement

D - an one of a kind arrangement

Answer : B

Explanation

Here $a_1/a_2= 1/2$, $b_1/b_2=2/4=1/2$ and $c_1/c_2=3/3=1$.
$\therefore a_1/a_2=b_1/b_2\neq c_1/c_2$.
∴Give system has no solution.

Hide Answer

Q 10 - In the event that 3x-5y = 5 and x/x+y = 5/7, then (x-y) =?

A - 3

B - 4

C - 6

D - 9

Answer : A

Explanation

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3x -5y=5 ...(i), 7x=5x+5y⇒2x-5y=0 ...(ii)
On subtracting (ii) from (i), we get=5.
3*5-5y=5⇒5y=10⇒y=2.
∴(x-y) = (5-2) =3.
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Hide Answer