Vector01 Answers for No.9395

$$Ans1 = \begin{bmatrix} ans.2 = (AB = < -7 , -6 >) \\ ans.3 = (AB = -7\,i - 6\,j) \\ ans.4 = (|AB| = (\sqrt{85}, 9.220)) \\ ans.5 = (u = -0.759\,i - 0.651\,j) \\ ans.6 = (c = -5.315\,i - 4.556\,j) \\ ans.7 = (d = 4.556\,i + 3.905\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = < 15 , 6 >) \\ ans.3 = (AB = 15\,i + 6\,j) \\ ans.4 = (|AB| = (3\sqrt{29}, 16.155)) \\ ans.5 = (u = 0.928\,i + 0.371\,j) \\ ans.6 = (c = 5.571\,i + 2.228\,j) \\ ans.7 = (d = -6.499\,i - 2.600\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = < 4 , 4 , 7 >) \\ ans.2 = (AB = 4\,i + 4\,j + 7\,k) \\ ans.3 = (|AB| = (9, 9.000)) \\ ans.4 = (u = 0.444\,i + 0.444\,j + 0.778\,k) \\ ans.5 = (c = 4.000\,i + 4.000\,j + 7.000\,k) \\ ans.6 = (d = -3.556\,i - 3.556\,j - 6.222\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = < 6 , -8 , 7 >) \\ ans.2 = (AB = 6\,i - 8\,j + 7\,k) \\ ans.3 = (|AB| = (\sqrt{149}, 12.207)) \\ ans.4 = (u = 0.492\,i - 0.655\,j + 0.573\,k) \\ ans.5 = (c = 2.458\,i - 3.277\,j + 2.867\,k) \\ ans.6 = (d = -3.932\,i + 5.243\,j - 4.588\,k) \end{bmatrix}$$

$$Ans5 = < -12 , -32 >, \quad , Ans6 = < -6 , -16 >, \quad , Ans7 = < 25 , 57 , 47 >, \quad , Ans8 = < -25 , -44 , 26 >$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{113}, 10.630]] \\ ans.2 = \begin{bmatrix} b = < -56 , 49 > \\ |b| = [7\sqrt{113}, 74.411] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = < 48 , -42 > \\ |c| = [6\sqrt{113}, 63.781] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = < -8 , 13 > \\ |a| = [\sqrt{194}, 13.928] \\ |b| = [\sqrt{89}, 9.434] \\ |a + b| = [\sqrt{233}, 15.264] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = < -18 , -3 > \\ |a| = [\sqrt{194}, 13.928] \\ |b| = [\sqrt{89}, 9.434] \\ |a - b| = [3\sqrt{37}, 18.248] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < 3 , -7 , -3 > \\ |a| = [\sqrt{210}, 14.491] \\ |b| = [\sqrt{233}, 15.264] \\ |a + b| = [\sqrt{67}, 8.185] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = < 13 , 17 , -19 > \\ |a| = [\sqrt{210}, 14.491] \\ |b| = [\sqrt{233}, 15.264] \\ |a - b| = [3\sqrt{91}, 28.618] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 52.125\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{74}, 8.602]) \\ ans.3 = (\theta = 215.538\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.9419

$$Ans1 = \begin{bmatrix} ans.2 = (AB = <3, -3>) \\ ans.3 = (AB = 3\,i - 3\,j) \\ ans.4 = (|AB| = (3\sqrt{2}, 4.243)) \\ ans.5 = (u = 0.707\,i - 0.707\,j) \\ ans.6 = (c = 5.657\,i - 5.657\,j) \\ ans.7 = (d = -3.536\,i + 3.536\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = <-8, -6>) \\ ans.3 = (AB = -8\,i - 6\,j) \\ ans.4 = (|AB| = (10, 10.000)) \\ ans.5 = (u = -0.800\,i - 0.600\,j) \\ ans.6 = (c = -4.000\,i - 3.000\,j) \\ ans.7 = (d = 5.600\,i + 4.200\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = <4, -5, 6>) \\ ans.2 = (AB = 4\,i - 5\,j + 6\,k) \\ ans.3 = (|AB| = (\sqrt{77}, 8.775)) \\ ans.4 = (u = 0.456\,i - 0.570\,j + 0.684\,k) \\ ans.5 = (c = 4.103\,i - 5.128\,j + 6.154\,k) \\ ans.6 = (d = -2.279\,i + 2.849\,j - 3.419\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = <-13, 4, -17>) \\ ans.2 = (AB = -13\,i + 4\,j - 17\,k) \\ ans.3 = (|AB| = (\sqrt{474}, 21.772)) \\ ans.4 = (u = -0.597\,i + 0.184\,j - 0.781\,k) \\ ans.5 = (c = -3.583\,i + 1.102\,j - 4.685\,k) \\ ans.6 = (d = 4.777\,i - 1.470\,j + 6.247\,k) \end{bmatrix}$$

$$Ans5 = <24, -21>, \quad , Ans6 = <13, 10>, \quad , Ans7 = <-11, 24, -31>, \quad , Ans8 = <-18, 5, -16>$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{106}, 10.296]] \\ ans.2 = \begin{bmatrix} b = <30, 54> \\ |b| = [6\sqrt{106}, 61.774] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = <-25, -45> \\ |c| = [5\sqrt{106}, 51.478] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = <15, 2> \\ |a| = [3\sqrt{13}, 10.817] \\ |b| = [\sqrt{130}, 11.402] \\ |a + b| = [\sqrt{229}, 15.133] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = <-3, 16> \\ |a| = [3\sqrt{13}, 10.817] \\ |b| = [\sqrt{130}, 11.402] \\ |a - b| = [\sqrt{265}, 16.279] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = <-4, 18, -15> \\ |a| = [\sqrt{219}, 14.799] \\ |b| = [3\sqrt{26}, 15.297] \\ |a + b| = [\sqrt{565}, 23.770] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = <18, 4, 1> \\ |a| = [\sqrt{219}, 14.799] \\ |b| = [3\sqrt{26}, 15.297] \\ |a - b| = [\sqrt{341}, 18.466] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{113}, 10.630]) \\ ans.3 = (\theta = 48.814\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{145}, 12.042]) \\ ans.3 = (\theta = 131.634\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.9428

$$Ans1 = \begin{bmatrix} ans.2 = (AB = <7, 4>) \\ ans.3 = (AB = 7\,i + 4\,j) \\ ans.4 = (|AB| = (\sqrt{65}, 8.062)) \\ ans.5 = (u = 0.868\,i + 0.496\,j) \\ ans.6 = (c = 6.078\,i + 3.473\,j) \\ ans.7 = (d = -7.814\,i - 4.465\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = <-9, 5>) \\ ans.3 = (AB = -9\,i + 5\,j) \\ ans.4 = (|AB| = (\sqrt{106}, 10.296)) \\ ans.5 = (u = -0.874\,i + 0.486\,j) \\ ans.6 = (c = -4.371\,i + 2.428\,j) \\ ans.7 = (d = 6.119\,i - 3.400\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = <5, -8, 3>) \\ ans.2 = (AB = 5\,i - 8\,j + 3\,k) \\ ans.3 = (|AB| = (7\sqrt{2}, 9.899)) \\ ans.4 = (u = 0.505\,i - 0.808\,j + 0.303\,k) \\ ans.5 = (c = 2.525\,i - 4.041\,j + 1.515\,k) \\ ans.6 = (d = -3.536\,i + 5.657\,j - 2.121\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = <-6, 10, -8>) \\ ans.2 = (AB = -6\,i + 10\,j - 8\,k) \\ ans.3 = (|AB| = (10\sqrt{2}, 14.142)) \\ ans.4 = (u = -0.424\,i + 0.707\,j - 0.566\,k) \\ ans.5 = (c = -3.394\,i + 5.657\,j - 4.525\,k) \\ ans.6 = (d = 2.546\,i - 4.243\,j + 3.394\,k) \end{bmatrix}$$

$$Ans5 = <-28, 13>, \quad , Ans6 = <-53, -43>, \quad , Ans7 = <-47, 6, -33>, \quad , Ans8 = <-19, 6, -12>$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{89}, 9.434]] \\ ans.2 = \begin{bmatrix} b = <-35, -56> \\ |b| = [7\sqrt{89}, 66.038] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = <25, 40> \\ |c| = [5\sqrt{89}, 47.170] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = <-7, 19> \\ |a| = [\sqrt{218}, 14.765] \\ |b| = [6\sqrt{5}, 13.416] \\ |a + b| = [\sqrt{410}, 20.248] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = <-19, -5> \\ |a| = [\sqrt{218}, 14.765] \\ |b| = [6\sqrt{5}, 13.416] \\ |a - b| = [\sqrt{386}, 19.647] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = <-14, -5, -2> \\ |a| = [\sqrt{194}, 13.928] \\ |b| = [\sqrt{229}, 15.133] \\ |a + b| = [15, 15.000] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = <-2, 19, -16> \\ |a| = [\sqrt{194}, 13.928] \\ |b| = [\sqrt{229}, 15.133] \\ |a - b| = [3\sqrt{69}, 24.920] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{61}, 7.810]) \\ ans.3 = (\theta = 39.806\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 327.995\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.9459

$$Ans1 = \begin{bmatrix} ans.2 = (AB = < 3 , -5 >) \\ ans.3 = (AB = 3\,i - 5\,j) \\ ans.4 = (|AB| = (\sqrt{34}, 5.831)) \\ ans.5 = (u = 0.514\,i - 0.857\,j) \\ ans.6 = (c = 2.572\,i - 4.287\,j) \\ ans.7 = (d = -4.630\,i + 7.717\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = < -3 , -10 >) \\ ans.3 = (AB = -3\,i - 10\,j) \\ ans.4 = (|AB| = (\sqrt{109}, 10.440)) \\ ans.5 = (u = -0.287\,i - 0.958\,j) \\ ans.6 = (c = -2.011\,i - 6.705\,j) \\ ans.7 = (d = 1.724\,i + 5.747\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = < -5 , -5 , -3 >) \\ ans.2 = (AB = -5\,i - 5\,j - 3\,k) \\ ans.3 = (|AB| = (\sqrt{59}, 7.681)) \\ ans.4 = (u = -0.651\,i - 0.651\,j - 0.391\,k) \\ ans.5 = (c = -4.557\,i - 4.557\,j - 2.734\,k) \\ ans.6 = (d = 3.906\,i + 3.906\,j + 2.343\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = < 13 , -20 , 3 >) \\ ans.2 = (AB = 13\,i - 20\,j + 3\,k) \\ ans.3 = (|AB| = (17\sqrt{2}, 24.042)) \\ ans.4 = (u = 0.541\,i - 0.832\,j + 0.125\,k) \\ ans.5 = (c = 3.244\,i - 4.991\,j + 0.749\,k) \\ ans.6 = (d = -2.704\,i + 4.159\,j - 0.624\,k) \end{bmatrix}$$

$$Ans5 = < -19 , -9 >, \quad , Ans6 = < -6 , -6 >, \quad , Ans7 = < 32 , 12 , -39 >, \quad , Ans8 = < 2 , 10 , 51 >$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{113}, 10.630]] \\ ans.2 = \begin{bmatrix} b = < 42 , 48 > \\ |b| = [6\sqrt{113}, 63.781] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = < -35 , -40 > \\ |c| = [5\sqrt{113}, 53.151] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = < 18 , -3 > \\ |a| = [\sqrt{233}, 15.264] \\ |b| = [\sqrt{146}, 12.083] \\ |a + b| = [3\sqrt{37}, 18.248] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = < 8 , 19 > \\ |a| = [\sqrt{233}, 15.264] \\ |b| = [\sqrt{146}, 12.083] \\ |a - b| = [5\sqrt{17}, 20.616] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < -14 , 3 , -5 > \\ |a| = [\sqrt{161}, 12.689] \\ |b| = [\sqrt{213}, 14.595] \\ |a + b| = [\sqrt{230}, 15.166] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = < 2 , 17 , 15 > \\ |a| = [\sqrt{161}, 12.689] \\ |b| = [\sqrt{213}, 14.595] \\ |a - b| = [\sqrt{518}, 22.760] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{61}, 7.810]) \\ ans.3 = (\theta = 39.806\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{85}, 9.220]) \\ ans.3 = (\theta = 130.601\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.9476

$$Ans1 = \begin{bmatrix} ans.2 = (AB = <-3, -7>) \\ ans.3 = (AB = -3\,i - 7\,j) \\ ans.4 = (|AB| = (\sqrt{58}, 7.616)) \\ ans.5 = (u = -0.394\,i - 0.919\,j) \\ ans.6 = (c = -1.970\,i - 4.596\,j) \\ ans.7 = (d = 3.545\,i + 8.272\,j) \end{bmatrix}, \quad Ans2 = \begin{bmatrix} ans.2 = (AB = <6, -4>) \\ ans.3 = (AB = 6\,i - 4\,j) \\ ans.4 = (|AB| = (2\sqrt{13}, 7.211)) \\ ans.5 = (u = 0.832\,i - 0.555\,j) \\ ans.6 = (c = 4.992\,i - 3.328\,j) \\ ans.7 = (d = -6.656\,i + 4.438\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = <6, -8, 9>) \\ ans.2 = (AB = 6\,i - 8\,j + 9\,k) \\ ans.3 = (|AB| = (\sqrt{181}, 13.454)) \\ ans.4 = (u = 0.446\,i - 0.595\,j + 0.669\,k) \\ ans.5 = (c = 3.122\,i - 4.162\,j + 4.683\,k) \\ ans.6 = (d = -4.014\,i + 5.352\,j - 6.021\,k) \end{bmatrix}, \quad Ans4 = \begin{bmatrix} ans.1 = (AB = <-4, 4, 5>) \\ ans.2 = (AB = -4\,i + 4\,j + 5\,k) \\ ans.3 = (|AB| = (\sqrt{57}, 7.550)) \\ ans.4 = (u = -0.530\,i + 0.530\,j + 0.662\,k) \\ ans.5 = (c = -3.709\,i + 3.709\,j + 4.636\,k) \\ ans.6 = (d = 3.179\,i - 3.179\,j - 3.974\,k) \end{bmatrix}$$

$$Ans5 = <34, 30>, \quad Ans6 = <-1, -24>, \quad Ans7 = <-30, -1, -26>, \quad Ans8 = <16, -28, -18>$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{89}, 9.434]] \\ ans.2 = \begin{bmatrix} b = <24, -15> \\ |b| = [3\sqrt{89}, 28.302] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = <-56, 35> \\ |c| = [7\sqrt{89}, 66.038] \end{bmatrix} \end{bmatrix}, \quad Ans10 = \begin{bmatrix} a + b = <20, 4> \\ |a| = [10, 10.000] \\ |b| = [2\sqrt{61}, 15.620] \\ |a + b| = [4\sqrt{26}, 20.396] \end{bmatrix}, \quad Ans11 = \begin{bmatrix} a - b = <-4, -16> \\ |a| = [10, 10.000] \\ |b| = [2\sqrt{61}, 15.620] \\ |a - b| = [4\sqrt{17}, 16.492] \end{bmatrix}, \quad \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = <-13, 18, -1> \\ |a| = [\sqrt{123}, 11.091] \\ |b| = [\sqrt{221}, 14.866] \\ |a + b| = [\sqrt{494}, 22.226] \end{bmatrix}, \quad Ans13 = \begin{bmatrix} a - b = <3, -4, -13> \\ |a| = [\sqrt{123}, 11.091] \\ |b| = [\sqrt{221}, 14.866] \\ |a - b| = [\sqrt{194}, 13.928] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{145}, 12.042]) \\ ans.3 = (\theta = 41.634\ degrees) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{145}, 12.042]) \\ ans.3 = (\theta = 131.634\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.9491

$$Ans1 = \begin{bmatrix} ans.2 = (AB = <-4, 4>) \\ ans.3 = (AB = -4\,i + 4\,j) \\ ans.4 = (|AB| = (4\sqrt{2}, 5.657)) \\ ans.5 = (u = -0.707\,i + 0.707\,j) \\ ans.6 = (c = -4.950\,i + 4.950\,j) \\ ans.7 = (d = 4.243\,i - 4.243\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = <-9, 6>) \\ ans.3 = (AB = -9\,i + 6\,j) \\ ans.4 = (|AB| = (3\sqrt{13}, 10.817)) \\ ans.5 = (u = -0.832\,i + 0.555\,j) \\ ans.6 = (c = -7.488\,i + 4.992\,j) \\ ans.7 = (d = 5.824\,i - 3.883\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = <8, -6, 9>) \\ ans.2 = (AB = 8\,i - 6\,j + 9\,k) \\ ans.3 = (|AB| = (\sqrt{181}, 13.454)) \\ ans.4 = (u = 0.595\,i - 0.446\,j + 0.669\,k) \\ ans.5 = (c = 5.352\,i - 4.014\,j + 6.021\,k) \\ ans.6 = (d = -3.568\,i + 2.676\,j - 4.014\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = <-3, -12, -3>) \\ ans.2 = (AB = -3\,i - 12\,j - 3\,k) \\ ans.3 = (|AB| = (9\sqrt{2}, 12.728)) \\ ans.4 = (u = -0.236\,i - 0.943\,j - 0.236\,k) \\ ans.5 = (c = -2.121\,i - 8.485\,j - 2.121\,k) \\ ans.6 = (d = 1.179\,i + 4.714\,j + 1.179\,k) \end{bmatrix}$$

$$Ans5 = <9, 8>, \quad , Ans6 = <56, 36>, \quad , Ans7 = <-45, -3, 6>, \quad , Ans8 = <-32, 14, -17>$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{61}, 7.810]] \\ ans.2 = \begin{bmatrix} b = <-18, 15> \\ |b| = [3\sqrt{61}, 23.431] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = <24, -20> \\ |c| = [4\sqrt{61}, 31.241] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = <-3, 12> \\ |a| = [\sqrt{89}, 9.434] \\ |b| = [\sqrt{74}, 8.602] \\ |a + b| = [3\sqrt{17}, 12.369] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = <-13, -2> \\ |a| = [\sqrt{89}, 9.434] \\ |b| = [\sqrt{74}, 8.602] \\ |a - b| = [\sqrt{173}, 13.153] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = <-3, 6, -3> \\ |a| = [11\sqrt{3}, 19.053] \\ |b| = [3\sqrt{17}, 12.369] \\ |a + b| = [3\sqrt{6}, 7.348] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = <-19, 16, -19> \\ |a| = [11\sqrt{3}, 19.053] \\ |b| = [3\sqrt{17}, 12.369] \\ |a - b| = [\sqrt{978}, 31.273] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 57.995 \text{ degrees}) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 307.875 \text{ degrees}) \end{bmatrix}$$

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Vector01 Answers for No.9633

$$Ans1 = \begin{bmatrix} ans.2 = (AB = <3, -5>) \\ ans.3 = (AB = 3\,i - 5\,j) \\ ans.4 = (|AB| = (\sqrt{34}, 5.831)) \\ ans.5 = (u = 0.514\,i - 0.857\,j) \\ ans.6 = (c = 4.116\,i - 6.860\,j) \\ ans.7 = (d = -4.630\,i + 7.717\,j) \end{bmatrix}, \quad Ans2 = \begin{bmatrix} ans.2 = (AB = <-14, 6>) \\ ans.3 = (AB = -14\,i + 6\,j) \\ ans.4 = (|AB| = (2\sqrt{58}, 15.232)) \\ ans.5 = (u = -0.919\,i + 0.394\,j) \\ ans.6 = (c = -4.596\,i + 1.970\,j) \\ ans.7 = (d = 6.434\,i - 2.757\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = <4, -3, -3>) \\ ans.2 = (AB = 4\,i - 3\,j - 3\,k) \\ ans.3 = (|AB| = (\sqrt{34}, 5.831)) \\ ans.4 = (u = 0.686\,i - 0.514\,j - 0.514\,k) \\ ans.5 = (c = 6.174\,i - 4.630\,j - 4.630\,k) \\ ans.6 = (d = -4.116\,i + 3.087\,j + 3.087\,k) \end{bmatrix}, \quad Ans4 = \begin{bmatrix} ans.1 = (AB = <-4, -8, -5>) \\ ans.2 = (AB = -4\,i - 8\,j - 5\,k) \\ ans.3 = (|AB| = (\sqrt{105}, 10.247)) \\ ans.4 = (u = -0.390\,i - 0.781\,j - 0.488\,k) \\ ans.5 = (c = -3.123\,i - 6.246\,j - 3.904\,k) \\ ans.6 = (d = 2.342\,i + 4.684\,j + 2.928\,k) \end{bmatrix}$$

$$Ans5 = <23, -13>, \quad Ans6 = <-20, -40>, \quad Ans7 = <-13, -2, -21>, \quad Ans8 = <21, 17, -18>$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [10, 10.000]] \\ ans.2 = \begin{bmatrix} b = <56, 42> \\ |b| = [70, 70.000] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = <-40, -30> \\ |c| = [50, 50.000] \end{bmatrix} \end{bmatrix}, \quad Ans10 = \begin{bmatrix} a + b = <18, 4> \\ |a| = [\sqrt{146}, 12.083] \\ |b| = [\sqrt{130}, 11.402] \\ |a + b| = [2\sqrt{85}, 18.439] \end{bmatrix}, \quad Ans11 = \begin{bmatrix} a - b = <4, -14> \\ |a| = [\sqrt{146}, 12.083] \\ |b| = [\sqrt{130}, 11.402] \\ |a - b| = [2\sqrt{53}, 14.560] \end{bmatrix}, \quad \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = <-5, -17, 20> \\ |a| = [\sqrt{251}, 15.843] \\ |b| = [\sqrt{257}, 16.031] \\ |a + b| = [\sqrt{714}, 26.721] \end{bmatrix}, \quad Ans13 = \begin{bmatrix} a - b = <-17, 3, -2> \\ |a| = [\sqrt{251}, 15.843] \\ |b| = [\sqrt{257}, 16.031] \\ |a - b| = [\sqrt{302}, 17.378] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{85}, 9.220]) \\ ans.3 = (\theta = 49.399\ degrees) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{61}, 7.810]) \\ ans.3 = (\theta = 320.194\ degrees) \end{bmatrix}$$

Vector01 Answers for No.9711

$$Ans1 = \begin{bmatrix} ans.2 = (AB = <8, -6>) \\ ans.3 = (AB = 8\,i - 6\,j) \\ ans.4 = (|AB| = (10, 10.000)) \\ ans.5 = (u = 0.800\,i - 0.600\,j) \\ ans.6 = (c = 4.000\,i - 3.000\,j) \\ ans.7 = (d = -4.800\,i + 3.600\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = <3, 11>) \\ ans.3 = (AB = 3\,i + 11\,j) \\ ans.4 = (|AB| = (\sqrt{130}, 11.402)) \\ ans.5 = (u = 0.263\,i + 0.965\,j) \\ ans.6 = (c = 1.579\,i + 5.789\,j) \\ ans.7 = (d = -1.842\,i - 6.753\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = <3, 6, -4>) \\ ans.2 = (AB = 3\,i + 6\,j - 4\,k) \\ ans.3 = (|AB| = (\sqrt{61}, 7.810)) \\ ans.4 = (u = 0.384\,i + 0.768\,j - 0.512\,k) \\ ans.5 = (c = 2.689\,i + 5.378\,j - 3.585\,k) \\ ans.6 = (d = -2.305\,i - 4.609\,j + 3.073\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = <-11, 8, -15>) \\ ans.2 = (AB = -11\,i + 8\,j - 15\,k) \\ ans.3 = (|AB| = (\sqrt{410}, 20.248)) \\ ans.4 = (u = -0.543\,i + 0.395\,j - 0.741\,k) \\ ans.5 = (c = -4.346\,i + 3.161\,j - 5.926\,k) \\ ans.6 = (d = 4.889\,i - 3.556\,j + 6.667\,k) \end{bmatrix}$$

$$Ans5 = <-32, -1>, \quad , Ans6 = <21, 41>, \quad , Ans7 = <-15, -50, -14>, \quad , Ans8 = <11, -14, 10>$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{113}, 10.630]] \\ ans.2 = \begin{bmatrix} b = <-24, 21> \\ |b| = [3\sqrt{113}, 31.890] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = <56, -49> \\ |c| = [7\sqrt{113}, 74.411] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = <17, -4> \\ |a| = [2\sqrt{34}, 11.662] \\ |b| = [\sqrt{149}, 12.207] \\ |a + b| = [\sqrt{305}, 17.464] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = <3, 16> \\ |a| = [2\sqrt{34}, 11.662] \\ |b| = [\sqrt{149}, 12.207] \\ |a - b| = [\sqrt{265}, 16.279] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = <-15, 5, -15> \\ |a| = [\sqrt{293}, 17.117] \\ |b| = [\sqrt{138}, 11.747] \\ |a + b| = [5\sqrt{19}, 21.794] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = <-5, 19, 1> \\ |a| = [\sqrt{293}, 17.117] \\ |b| = [\sqrt{138}, 11.747] \\ |a - b| = [3\sqrt{43}, 19.672] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{61}, 7.810]) \\ ans.3 = (\theta = 50.194\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{85}, 9.220]) \\ ans.3 = (\theta = 310.601\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.9784

$$Ans1 = \begin{bmatrix} ans.2 = (AB = <-4, -6>) \\ ans.3 = (AB = -4\,i - 6\,j) \\ ans.4 = (|AB| = (2\sqrt{13}, 7.211)) \\ ans.5 = (u = -0.555\,i - 0.832\,j) \\ ans.6 = (c = -3.883\,i - 5.824\,j) \\ ans.7 = (d = 4.438\,i + 6.656\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = <-8, 4>) \\ ans.3 = (AB = -8\,i + 4\,j) \\ ans.4 = (|AB| = (4\sqrt{5}, 8.944)) \\ ans.5 = (u = -0.894\,i + 0.447\,j) \\ ans.6 = (c = -7.155\,i + 3.578\,j) \\ ans.7 = (d = 6.261\,i - 3.130\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = <-4, -4, 8>) \\ ans.2 = (AB = -4\,i - 4\,j + 8\,k) \\ ans.3 = (|AB| = (4\sqrt{6}, 9.798)) \\ ans.4 = (u = -0.408\,i - 0.408\,j + 0.816\,k) \\ ans.5 = (c = -2.449\,i - 2.449\,j + 4.899\,k) \\ ans.6 = (d = 2.858\,i + 2.858\,j - 5.715\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = <-5, 11, -17>) \\ ans.2 = (AB = -5\,i + 11\,j - 17\,k) \\ ans.3 = (|AB| = (\sqrt{435}, 20.857)) \\ ans.4 = (u = -0.240\,i + 0.527\,j - 0.815\,k) \\ ans.5 = (c = -1.678\,i + 3.692\,j - 5.706\,k) \\ ans.6 = (d = 1.438\,i - 3.164\,j + 4.891\,k) \end{bmatrix}$$

$$Ans5 = <20, 1>, \quad , Ans6 = <-6, 17>, \quad , Ans7 = <-25, 27, 35>, \quad , Ans8 = <2, -27, 3>$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{74}, 8.602]] \\ ans.2 = \begin{bmatrix} b = <-42, 30> \\ |b| = [6\sqrt{74}, 51.614] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = <21, -15> \\ |c| = [3\sqrt{74}, 25.807] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = <18, -3> \\ |a| = [6\sqrt{5}, 13.416] \\ |b| = [3\sqrt{13}, 10.817] \\ |a + b| = [3\sqrt{37}, 18.248] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = <6, 15> \\ |a| = [6\sqrt{5}, 13.416] \\ |b| = [3\sqrt{13}, 10.817] \\ |a - b| = [3\sqrt{29}, 16.155] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = <-1, -18, -18> \\ |a| = [\sqrt{371}, 19.261] \\ |b| = [\sqrt{174}, 13.191] \\ |a + b| = [\sqrt{649}, 25.475] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = <19, -4, -8> \\ |a| = [\sqrt{371}, 19.261] \\ |b| = [\sqrt{174}, 13.191] \\ |a - b| = [21, 21.000] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 37.875\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{61}, 7.810]) \\ ans.3 = (\theta = 320.194\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.10143

$$Ans1 = \begin{bmatrix} ans.2 = (AB = <7, 5>) \\ ans.3 = (AB = 7\,i + 5\,j) \\ ans.4 = (|AB| = (\sqrt{74}, 8.602)) \\ ans.5 = (u = 0.814\,i + 0.581\,j) \\ ans.6 = (c = 7.324\,i + 5.231\,j) \\ ans.7 = (d = -5.696\,i - 4.069\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = <5, -5>) \\ ans.3 = (AB = 5\,i - 5\,j) \\ ans.4 = (|AB| = (5\sqrt{2}, 7.071)) \\ ans.5 = (u = 0.707\,i - 0.707\,j) \\ ans.6 = (c = 6.364\,i - 6.364\,j) \\ ans.7 = (d = -5.657\,i + 5.657\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = <10, -5, 3>) \\ ans.2 = (AB = 10\,i - 5\,j + 3\,k) \\ ans.3 = (|AB| = (\sqrt{134}, 11.576)) \\ ans.4 = (u = 0.864\,i - 0.432\,j + 0.259\,k) \\ ans.5 = (c = 6.911\,i - 3.455\,j + 2.073\,k) \\ ans.6 = (d = -5.183\,i + 2.592\,j - 1.555\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = <7, -8, -4>) \\ ans.2 = (AB = 7\,i - 8\,j - 4\,k) \\ ans.3 = (|AB| = (\sqrt{129}, 11.358)) \\ ans.4 = (u = 0.616\,i - 0.704\,j - 0.352\,k) \\ ans.5 = (c = 4.931\,i - 5.635\,j - 2.817\,k) \\ ans.6 = (d = -5.547\,i + 6.339\,j + 3.170\,k) \end{bmatrix}$$

$$Ans5 = <-42, -31>, \quad , Ans6 = <-19, -18>, \quad , Ans7 = <12, 16, -23>, \quad , Ans8 = <-3, 15, -16>$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{145}, 12.042]] \\ ans.2 = \begin{bmatrix} b = <56, 63> \\ |b| = [7\sqrt{145}, 84.291] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = <-48, -54> \\ |c| = [6\sqrt{145}, 72.250] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = <-2, 20> \\ |a| = [\sqrt{202}, 14.213] \\ |b| = [\sqrt{130}, 11.402] \\ |a + b| = [2\sqrt{101}, 20.100] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = <-16, 2> \\ |a| = [\sqrt{202}, 14.213] \\ |b| = [\sqrt{130}, 11.402] \\ |a - b| = [2\sqrt{65}, 16.125] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = <-19, 1, 4> \\ |a| = [\sqrt{213}, 14.595] \\ |b| = [3\sqrt{29}, 16.155] \\ |a + b| = [3\sqrt{42}, 19.442] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = <-1, 13, -20> \\ |a| = [\sqrt{213}, 14.595] \\ |b| = [3\sqrt{29}, 16.155] \\ |a - b| = [\sqrt{570}, 23.875] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{61}, 7.810]) \\ ans.3 = (\theta = 50.194\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{85}, 9.220]) \\ ans.3 = (\theta = 229.399\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.10359

$$Ans1 = \begin{bmatrix} ans.2 = (AB = < 5\ ,\ -9 >) \\ ans.3 = (AB = 5\ i - 9\ j) \\ ans.4 = (\left|AB\right| = (\sqrt{106}, 10.296)) \\ ans.5 = (u = 0.486\ i - 0.874\ j) \\ ans.6 = (c = 4.371\ i - 7.867\ j) \\ ans.7 = (d = -2.428\ i + 4.371\ j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = < -3\ ,\ 11 >) \\ ans.3 = (AB = -3\ i + 11\ j) \\ ans.4 = (\left|AB\right| = (\sqrt{130}, 11.402)) \\ ans.5 = (u = -0.263\ i + 0.965\ j) \\ ans.6 = (c = -2.368\ i + 8.683\ j) \\ ans.7 = (d = 1.842\ i - 6.753\ j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = < 3\ ,\ -8\ ,\ 7 >) \\ ans.2 = (AB = 3\ i - 8\ j + 7\ k) \\ ans.3 = (\left|AB\right| = (\sqrt{122}, 11.045)) \\ ans.4 = (u = 0.272\ i - 0.724\ j + 0.634\ k) \\ ans.5 = (c = 1.358\ i - 3.621\ j + 3.169\ k) \\ ans.6 = (d = -2.444\ i + 6.519\ j - 5.704\ k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = < -4\ ,\ -5\ ,\ -8 >) \\ ans.2 = (AB = -4\ i - 5\ j - 8\ k) \\ ans.3 = (\left|AB\right| = (\sqrt{105}, 10.247)) \\ ans.4 = (u = -0.390\ i - 0.488\ j - 0.781\ k) \\ ans.5 = (c = -3.513\ i - 4.392\ j - 7.026\ k) \\ ans.6 = (d = 2.342\ i + 2.928\ j + 4.684\ k) \end{bmatrix}$$

$$Ans5 = < 9\ ,\ 10 >, \quad , Ans6 = < 7\ ,\ 34 >, \quad , Ans7 = < -48\ ,\ 60\ ,\ 18 >, \quad , Ans8 = < 39\ ,\ -48\ ,\ -6 >$$

$$Ans9 = \begin{bmatrix} ans.1 = [\left|a\right| = [10, 10.000]] \\ ans.2 = \begin{bmatrix} b = < 48\ ,\ -36 > \\ \left|b\right| = [60, 60.000] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = < -56\ ,\ 42 > \\ \left|c\right| = [70, 70.000] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = < 18\ ,\ -2 > \\ \left|a\right| = [\sqrt{221}, 14.866] \\ \left|b\right| = [\sqrt{113}, 10.630] \\ \left|a + b\right| = [2\sqrt{82}, 18.111] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = < 4\ ,\ -18 > \\ \left|a\right| = [\sqrt{221}, 14.866] \\ \left|b\right| = [\sqrt{113}, 10.630] \\ \left|a - b\right| = [2\sqrt{85}, 18.439] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < -17\ ,\ 2\ ,\ -4 > \\ \left|a\right| = [7\sqrt{5}, 15.652] \\ \left|b\right| = [\sqrt{238}, 15.427] \\ \left|a + b\right| = [\sqrt{309}, 17.578] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = < 1\ ,\ -20\ ,\ -16 > \\ \left|a\right| = [7\sqrt{5}, 15.652] \\ \left|b\right| = [\sqrt{238}, 15.427] \\ \left|a - b\right| = [3\sqrt{73}, 25.632] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (\left|a\right| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 57.995\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (\left|a\right| = [\sqrt{74}, 8.602]) \\ ans.3 = (\theta = 125.538\ degrees) \end{bmatrix}$$

Vector01 Answers for No.10626

$$Ans1 = \begin{bmatrix} ans.2 = (AB = < 4 , 6 >) \\ ans.3 = (AB = 4\,i + 6\,j) \\ ans.4 = (|AB| = (2\sqrt{13}, 7.211)) \\ ans.5 = (u = 0.555\,i + 0.832\,j) \\ ans.6 = (c = 2.774\,i + 4.160\,j) \\ ans.7 = (d = -3.883\,i - 5.824\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = < 4 , 9 >) \\ ans.3 = (AB = 4\,i + 9\,j) \\ ans.4 = (|AB| = (\sqrt{97}, 9.849)) \\ ans.5 = (u = 0.406\,i + 0.914\,j) \\ ans.6 = (c = 3.249\,i + 7.310\,j) \\ ans.7 = (d = -2.031\,i - 4.569\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = < -4 , -5 , -3 >) \\ ans.2 = (AB = -4\,i - 5\,j - 3\,k) \\ ans.3 = (|AB| = (5\sqrt{2}, 7.071)) \\ ans.4 = (u = -0.566\,i - 0.707\,j - 0.424\,k) \\ ans.5 = (c = -5.091\,i - 6.364\,j - 3.818\,k) \\ ans.6 = (d = 3.394\,i + 4.243\,j + 2.546\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = < 10 , -8 , 12 >) \\ ans.2 = (AB = 10\,i - 8\,j + 12\,k) \\ ans.3 = (|AB| = (2\sqrt{77}, 17.550)) \\ ans.4 = (u = 0.570\,i - 0.456\,j + 0.684\,k) \\ ans.5 = (c = 2.849\,i - 2.279\,j + 3.419\,k) \\ ans.6 = (d = -4.558\,i + 3.647\,j - 5.470\,k) \end{bmatrix}$$

$$Ans5 = < 0 , -11 >, \quad , Ans6 = < -21 , 5 >, \quad , Ans7 = < -22 , -32 , 31 >, \quad , Ans8 = < -34 , -47 , 39 >$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{74}, 8.602]] \\ ans.2 = \begin{bmatrix} b = < -15 , 21 > \\ |b| = [3\sqrt{74}, 25.807] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = < 25 , -35 > \\ |c| = [5\sqrt{74}, 43.012] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = < 3 , 18 > \\ |a| = [2\sqrt{41}, 12.806] \\ |b| = [\sqrt{185}, 13.601] \\ |a + b| = [3\sqrt{37}, 18.248] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = < -19 , 2 > \\ |a| = [2\sqrt{41}, 12.806] \\ |b| = [\sqrt{185}, 13.601] \\ |a - b| = [\sqrt{365}, 19.105] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < -19 , -20 , -15 > \\ |a| = [\sqrt{258}, 16.062] \\ |b| = [2\sqrt{70}, 16.733] \\ |a + b| = [\sqrt{986}, 31.401] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = < -7 , 4 , 5 > \\ |a| = [\sqrt{258}, 16.062] \\ |b| = [2\sqrt{70}, 16.733] \\ |a - b| = [3\sqrt{10}, 9.487] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 37.875\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{106}, 10.296]) \\ ans.3 = (\theta = 150.945\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.11002

$$Ans1 = \begin{bmatrix} ans.2 = (AB = < -5 , 7 >) \\ ans.3 = (AB = -5\, i + 7\, j) \\ ans.4 = (\left|AB\right| = (\sqrt{74}, 8.602)) \\ ans.5 = (u = -0.581\, i + 0.814\, j) \\ ans.6 = (c = -5.231\, i + 7.324\, j) \\ ans.7 = (d = 2.906\, i - 4.069\, j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = < -5 , 3 >) \\ ans.3 = (AB = -5\, i + 3\, j) \\ ans.4 = (\left|AB\right| = (\sqrt{34}, 5.831)) \\ ans.5 = (u = -0.857\, i + 0.514\, j) \\ ans.6 = (c = -7.717\, i + 4.630\, j) \\ ans.7 = (d = 6.860\, i - 4.116\, j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = < 4 , 8 , -8 >) \\ ans.2 = (AB = 4\, i + 8\, j - 8\, k) \\ ans.3 = (\left|AB\right| = (12, 12.000)) \\ ans.4 = (u = 0.333\, i + 0.667\, j - 0.667\, k) \\ ans.5 = (c = 2.667\, i + 5.333\, j - 5.333\, k) \\ ans.6 = (d = -3.000\, i - 6.000\, j + 6.000\, k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = < 13 , 10 , -5 >) \\ ans.2 = (AB = 13\, i + 10\, j - 5\, k) \\ ans.3 = (\left|AB\right| = (7\sqrt{6}, 17.146)) \\ ans.4 = (u = 0.758\, i + 0.583\, j - 0.292\, k) \\ ans.5 = (c = 4.549\, i + 3.499\, j - 1.750\, k) \\ ans.6 = (d = -6.824\, i - 5.249\, j + 2.624\, k) \end{bmatrix}$$

$$Ans5 = < 28 , -16 >, \quad , Ans6 = < -23 , 21 >, \quad , Ans7 = < 1 , 13 , -23 >, \quad , Ans8 = < 4 , 10 , -24 >$$

$$Ans9 = \begin{bmatrix} ans.1 = [\left|a\right| = [\sqrt{145}, 12.042]] \\ ans.2 = \begin{bmatrix} b = < 54 , 48 > \\ \left|b\right| = [6\sqrt{145}, 72.250] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = < -27 , -24 > \\ \left|c\right| = [3\sqrt{145}, 36.125] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = < 18 , -7 > \\ \left|a\right| = [\sqrt{157}, 12.530] \\ \left|b\right| = [\sqrt{218}, 14.765] \\ \left|a + b\right| = [\sqrt{373}, 19.313] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = < 4 , 19 > \\ \left|a\right| = [\sqrt{157}, 12.530] \\ \left|b\right| = [\sqrt{218}, 14.765] \\ \left|a - b\right| = [\sqrt{377}, 19.416] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < -1 , -2 , 16 > \\ \left|a\right| = [\sqrt{217}, 14.731] \\ \left|b\right| = [10\sqrt{2}, 14.142] \\ \left|a + b\right| = [3\sqrt{29}, 16.155] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = < 19 , 14 , 4 > \\ \left|a\right| = [\sqrt{217}, 14.731] \\ \left|b\right| = [10\sqrt{2}, 14.142] \\ \left|a - b\right| = [\sqrt{573}, 23.937] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (\left|a\right| = [\sqrt{74}, 8.602]) \\ ans.3 = (\theta = 35.538\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (\left|a\right| = [\sqrt{106}, 10.296]) \\ ans.3 = (\theta = 330.945\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.11188

$$Ans1 = \begin{bmatrix} ans.2 = (AB = <4, 5>) \\ ans.3 = (AB = 4\,i + 5\,j) \\ ans.4 = (|AB| = (\sqrt{41}, 6.403)) \\ ans.5 = (u = 0.625\,i + 0.781\,j) \\ ans.6 = (c = 4.998\,i + 6.247\,j) \\ ans.7 = (d = -5.622\,i - 7.028\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = <4, 10>) \\ ans.3 = (AB = 4\,i + 10\,j) \\ ans.4 = (|AB| = (2\sqrt{29}, 10.770)) \\ ans.5 = (u = 0.371\,i + 0.928\,j) \\ ans.6 = (c = 1.857\,i + 4.642\,j) \\ ans.7 = (d = -3.343\,i - 8.356\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = <6, 4, 3>) \\ ans.2 = (AB = 6\,i + 4\,j + 3\,k) \\ ans.3 = (|AB| = (\sqrt{61}, 7.810)) \\ ans.4 = (u = 0.768\,i + 0.512\,j + 0.384\,k) \\ ans.5 = (c = 3.841\,i + 2.561\,j + 1.921\,k) \\ ans.6 = (d = -5.378\,i - 3.585\,j - 2.689\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = <13, -6, 16>) \\ ans.2 = (AB = 13\,i - 6\,j + 16\,k) \\ ans.3 = (|AB| = (\sqrt{461}, 21.471)) \\ ans.4 = (u = 0.605\,i - 0.279\,j + 0.745\,k) \\ ans.5 = (c = 3.027\,i - 1.397\,j + 3.726\,k) \\ ans.6 = (d = -5.449\,i + 2.515\,j - 6.707\,k) \end{bmatrix}$$

$$Ans5 = <-32, 24>, \quad , Ans6 = <3, 20>, \quad , Ans7 = <-29, 67, -7>, \quad , Ans8 = <-28, -8, 11>$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [3\sqrt{13}, 10.817]] \\ ans.2 = \begin{bmatrix} b = <-36, -54> \\ |b| = [18\sqrt{13}, 64.900] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = <18, 27> \\ |c| = [9\sqrt{13}, 32.450] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = <20, -6> \\ |a| = [\sqrt{130}, 11.402] \\ |b| = [\sqrt{290}, 17.029] \\ |a + b| = [2\sqrt{109}, 20.881] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = <-2, 20> \\ |a| = [\sqrt{130}, 11.402] \\ |b| = [\sqrt{290}, 17.029] \\ |a - b| = [2\sqrt{101}, 20.100] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = <19, 1, 0> \\ |a| = [\sqrt{285}, 16.882] \\ |b| = [\sqrt{213}, 14.595] \\ |a + b| = [\sqrt{362}, 19.026] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = <3, 15, 20> \\ |a| = [\sqrt{285}, 16.882] \\ |b| = [\sqrt{213}, 14.595] \\ |a - b| = [\sqrt{634}, 25.179] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 37.875\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{106}, 10.296]) \\ ans.3 = (\theta = 150.945\ degrees) \end{bmatrix}$$

Vector01 Answers for No.11505

$$Ans1 = \begin{bmatrix} ans.2 = (AB = <4, 3>) \\ ans.3 = (AB = 4\,i + 3\,j) \\ ans.4 = (|AB| = (5, 5.000)) \\ ans.5 = (u = 0.800\,i + 0.600\,j) \\ ans.6 = (c = 4.800\,i + 3.600\,j) \\ ans.7 = (d = -7.200\,i - 5.400\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = <14, -3>) \\ ans.3 = (AB = 14\,i - 3\,j) \\ ans.4 = (|AB| = (\sqrt{205}, 14.318)) \\ ans.5 = (u = 0.978\,i - 0.210\,j) \\ ans.6 = (c = 5.867\,i - 1.257\,j) \\ ans.7 = (d = -4.889\,i + 1.048\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = <-10, -3, 7>) \\ ans.2 = (AB = -10\,i - 3\,j + 7\,k) \\ ans.3 = (|AB| = (\sqrt{158}, 12.570)) \\ ans.4 = (u = -0.796\,i - 0.239\,j + 0.557\,k) \\ ans.5 = (c = -3.978\,i - 1.193\,j + 2.784\,k) \\ ans.6 = (d = 5.569\,i + 1.671\,j - 3.898\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = <3, 3, 11>) \\ ans.2 = (AB = 3\,i + 3\,j + 11\,k) \\ ans.3 = (|AB| = (\sqrt{139}, 11.790)) \\ ans.4 = (u = 0.254\,i + 0.254\,j + 0.933\,k) \\ ans.5 = (c = 2.290\,i + 2.290\,j + 8.397\,k) \\ ans.6 = (d = -2.036\,i - 2.036\,j - 7.464\,k) \end{bmatrix}$$

$$Ans5 = <23, 38>, \quad , Ans6 = <-6, -14>, \quad , Ans7 = <36, 11, -17>, \quad , Ans8 = <28, -14, -23>$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{85}, 9.220]] \\ ans.2 = \begin{bmatrix} b = <42, -49> \\ |b| = [7\sqrt{85}, 64.537] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = <-30, 35> \\ |c| = [5\sqrt{85}, 46.098] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = <20, 3> \\ |a| = [\sqrt{113}, 10.630] \\ |b| = [\sqrt{194}, 13.928] \\ |a + b| = [\sqrt{409}, 20.224] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = <-6, 13> \\ |a| = [\sqrt{113}, 10.630] \\ |b| = [\sqrt{194}, 13.928] \\ |a - b| = [\sqrt{205}, 14.318] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = <-4, -1, 4> \\ |a| = [5\sqrt{13}, 18.028] \\ |b| = [10\sqrt{2}, 14.142] \\ |a + b| = [\sqrt{33}, 5.745] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = <-20, 19, 16> \\ |a| = [5\sqrt{13}, 18.028] \\ |b| = [10\sqrt{2}, 14.142] \\ |a - b| = [3\sqrt{113}, 31.890] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 57.995\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{61}, 7.810]) \\ ans.3 = (\theta = 140.194\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.12113

$$Ans1 = \begin{bmatrix} ans.2 = (AB = < 5\ , -10 >) \\ ans.3 = (AB = 5\ i - 10\ j) \\ ans.4 = (|AB| = (5\sqrt{5}, 11.180)) \\ ans.5 = (u = 0.447\ i - 0.894\ j) \\ ans.6 = (c = 3.578\ i - 7.155\ j) \\ ans.7 = (d = -4.025\ i + 8.050\ j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = < -7\ , 3 >) \\ ans.3 = (AB = -7\ i + 3\ j) \\ ans.4 = (|AB| = (\sqrt{58}, 7.616)) \\ ans.5 = (u = -0.919\ i + 0.394\ j) \\ ans.6 = (c = -4.596\ i + 1.970\ j) \\ ans.7 = (d = 8.272\ i - 3.545\ j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = < 4\ , 5\ , -5 >) \\ ans.2 = (AB = 4\ i + 5\ j - 5\ k) \\ ans.3 = (|AB| = (\sqrt{66}, 8.124)) \\ ans.4 = (u = 0.492\ i + 0.615\ j - 0.615\ k) \\ ans.5 = (c = 3.447\ i + 4.308\ j - 4.308\ k) \\ ans.6 = (d = -2.462\ i - 3.077\ j + 3.077\ k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = < -9\ , -3\ , -13 >) \\ ans.2 = (AB = -9\ i - 3\ j - 13\ k) \\ ans.3 = (|AB| = (\sqrt{259}, 16.093)) \\ ans.4 = (u = -0.559\ i - 0.186\ j - 0.808\ k) \\ ans.5 = (c = -5.033\ i - 1.678\ j - 7.270\ k) \\ ans.6 = (d = 4.474\ i + 1.491\ j + 6.462\ k) \end{bmatrix}$$

$$Ans5 = < -40\ , 58 >, \quad , Ans6 = < -5\ , -1 >, \quad , Ans7 = < 11\ , -9\ , -54 >, \quad , Ans8 = < -16\ , 1\ , 12 >$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{130}, 11.402]] \\ ans.2 = \begin{bmatrix} b = < 36\ , -28 > \\ |b| = [4\sqrt{130}, 45.607] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = < -54\ , 42 > \\ |c| = [6\sqrt{130}, 68.411] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = < 4\ , 19 > \\ |a| = [\sqrt{130}, 11.402] \\ |b| = [13, 13.000] \\ |a + b| = [\sqrt{377}, 19.416] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = < 14\ , -5 > \\ |a| = [\sqrt{130}, 11.402] \\ |b| = [13, 13.000] \\ |a - b| = [\sqrt{221}, 14.866] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < -14\ , 1\ , -20 > \\ |a| = [\sqrt{258}, 16.062] \\ |b| = [11, 11.000] \\ |a + b| = [\sqrt{597}, 24.434] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = < -2\ , -11\ , -6 > \\ |a| = [\sqrt{258}, 16.062] \\ |b| = [11, 11.000] \\ |a - b| = [\sqrt{161}, 12.689] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{61}, 7.810]) \\ ans.3 = (\theta = 39.806\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 147.995\ degrees) \end{bmatrix}$$

Vector01 Answers for No.12541

$$Ans1 = \begin{bmatrix} ans.2 = (AB = <-6, 3>) \\ ans.3 = (AB = -6\,i + 3\,j) \\ ans.4 = (|AB| = (3\sqrt{5}, 6.708)) \\ ans.5 = (u = -0.894\,i + 0.447\,j) \\ ans.6 = (c = -6.261\,i + 3.130\,j) \\ ans.7 = (d = 4.472\,i - 2.236\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = <9, 5>) \\ ans.3 = (AB = 9\,i + 5\,j) \\ ans.4 = (|AB| = (\sqrt{106}, 10.296)) \\ ans.5 = (u = 0.874\,i + 0.486\,j) \\ ans.6 = (c = 6.119\,i + 3.400\,j) \\ ans.7 = (d = -7.867\,i - 4.371\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = <7, 5, 5>) \\ ans.2 = (AB = 7\,i + 5\,j + 5\,k) \\ ans.3 = (|AB| = (3\sqrt{11}, 9.950)) \\ ans.4 = (u = 0.704\,i + 0.503\,j + 0.503\,k) \\ ans.5 = (c = 4.925\,i + 3.518\,j + 3.518\,k) \\ ans.6 = (d = -3.518\,i - 2.513\,j - 2.513\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = <10, -6, 11>) \\ ans.2 = (AB = 10\,i - 6\,j + 11\,k) \\ ans.3 = (|AB| = (\sqrt{257}, 16.031)) \\ ans.4 = (u = 0.624\,i - 0.374\,j + 0.686\,k) \\ ans.5 = (c = 3.119\,i - 1.871\,j + 3.431\,k) \\ ans.6 = (d = -4.990\,i + 2.994\,j - 5.489\,k) \end{bmatrix}$$

$$Ans5 = <22, 22>, \quad , Ans6 = <14, -31>, \quad , Ans7 = <16, 41, -27>, \quad , Ans8 = <34, -10, -16>$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{89}, 9.434]] \\ ans.2 = \begin{bmatrix} b = <40, -25> \\ |b| = [5\sqrt{89}, 47.170] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = <-32, 20> \\ |c| = [4\sqrt{89}, 37.736] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = <2, 13> \\ |a| = [2\sqrt{41}, 12.806] \\ |b| = [\sqrt{89}, 9.434] \\ |a + b| = [\sqrt{173}, 13.153] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = <18, 3> \\ |a| = [2\sqrt{41}, 12.806] \\ |b| = [\sqrt{89}, 9.434] \\ |a - b| = [3\sqrt{37}, 18.248] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = <-14, 13, 7> \\ |a| = [5\sqrt{10}, 15.811] \\ |b| = [\sqrt{114}, 10.677] \\ |a + b| = [3\sqrt{46}, 20.347] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = <-4, -3, 17> \\ |a| = [5\sqrt{10}, 15.811] \\ |b| = [\sqrt{114}, 10.677] \\ |a - b| = [\sqrt{314}, 17.720] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{74}, 8.602]) \\ ans.3 = (\theta = 35.538\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 322.125\ degrees) \end{bmatrix}$$

Vector01 Answers for No.12590

$$Ans1 = \begin{bmatrix} ans.2 = (AB = < -3 , 4 >) \\ ans.3 = (AB = -3\,i + 4\,j) \\ ans.4 = (|AB| = (5, 5.000)) \\ ans.5 = (u = -0.600\,i + 0.800\,j) \\ ans.6 = (c = -4.800\,i + 6.400\,j) \\ ans.7 = (d = 5.400\,i - 7.200\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = < 9 , -4 >) \\ ans.3 = (AB = 9\,i - 4\,j) \\ ans.4 = (|AB| = (\sqrt{97}, 9.849)) \\ ans.5 = (u = 0.914\,i - 0.406\,j) \\ ans.6 = (c = 6.397\,i - 2.843\,j) \\ ans.7 = (d = -4.569\,i + 2.031\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = < 5 , 5 , 6 >) \\ ans.2 = (AB = 5\,i + 5\,j + 6\,k) \\ ans.3 = (|AB| = (\sqrt{86}, 9.274)) \\ ans.4 = (u = 0.539\,i + 0.539\,j + 0.647\,k) \\ ans.5 = (c = 4.313\,i + 4.313\,j + 5.176\,k) \\ ans.6 = (d = -4.852\,i - 4.852\,j - 5.823\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = < -4 , -4 , -4 >) \\ ans.2 = (AB = -4\,i - 4\,j - 4\,k) \\ ans.3 = (|AB| = (4\sqrt{3}, 6.928)) \\ ans.4 = (u = -0.577\,i - 0.577\,j - 0.577\,k) \\ ans.5 = (c = -2.887\,i - 2.887\,j - 2.887\,k) \\ ans.6 = (d = 4.041\,i + 4.041\,j + 4.041\,k) \end{bmatrix}$$

$$Ans5 = < 40 , -44 >, \quad , Ans6 = < 19 , -27 >, \quad , Ans7 = < 27 , -13 , 9 >, \quad , Ans8 = < -9 , -1 , -39 >$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [3\sqrt{13}, 10.817]] \\ ans.2 = \begin{bmatrix} b = < 30 , -45 > \\ |b| = [15\sqrt{13}, 54.083] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = < -36 , 54 > \\ |c| = [18\sqrt{13}, 64.900] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = < 3 , 17 > \\ |a| = [5\sqrt{5}, 11.180] \\ |b| = [\sqrt{193}, 13.892] \\ |a + b| = [\sqrt{298}, 17.263] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = < 17 , -7 > \\ |a| = [5\sqrt{5}, 11.180] \\ |b| = [\sqrt{193}, 13.892] \\ |a - b| = [13\sqrt{2}, 18.385] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < 0 , 0 , 18 > \\ |a| = [5\sqrt{5}, 11.180] \\ |b| = [\sqrt{233}, 15.264] \\ |a + b| = [18, 18.000] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = < -10 , 16 , -6 > \\ |a| = [5\sqrt{5}, 11.180] \\ |b| = [\sqrt{233}, 15.264] \\ |a - b| = [14\sqrt{2}, 19.799] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{113}, 10.630]) \\ ans.3 = (\theta = 48.814\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{113}, 10.630]) \\ ans.3 = (\theta = 138.814\ degrees) \end{bmatrix}$$

Vector01 Answers for No.12621

$$Ans1 = \begin{bmatrix} ans.2 = (AB = < 3 , -6 >) \\ ans.3 = (AB = 3\, i - 6\, j) \\ ans.4 = (|AB| = (3\sqrt{5}, 6.708)) \\ ans.5 = (u = 0.447\, i - 0.894\, j) \\ ans.6 = (c = 3.130\, i - 6.261\, j) \\ ans.7 = (d = -4.025\, i + 8.050\, j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = < 4 , -9 >) \\ ans.3 = (AB = 4\, i - 9\, j) \\ ans.4 = (|AB| = (\sqrt{97}, 9.849)) \\ ans.5 = (u = 0.406\, i - 0.914\, j) \\ ans.6 = (c = 2.437\, i - 5.483\, j) \\ ans.7 = (d = -3.249\, i + 7.310\, j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = < 5 , 3 , -4 >) \\ ans.2 = (AB = 5\, i + 3\, j - 4\, k) \\ ans.3 = (|AB| = (5\sqrt{2}, 7.071)) \\ ans.4 = (u = 0.707\, i + 0.424\, j - 0.566\, k) \\ ans.5 = (c = 4.243\, i + 2.546\, j - 3.394\, k) \\ ans.6 = (d = -4.950\, i - 2.970\, j + 3.960\, k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = < 6 , -4 , -12 >) \\ ans.2 = (AB = 6\, i - 4\, j - 12\, k) \\ ans.3 = (|AB| = (14, 14.000)) \\ ans.4 = (u = 0.429\, i - 0.286\, j - 0.857\, k) \\ ans.5 = (c = 3.000\, i - 2.000\, j - 6.000\, k) \\ ans.6 = (d = -2.143\, i + 1.429\, j + 4.286\, k) \end{bmatrix}$$

$$Ans5 = < -8 , 11 >, \quad , Ans6 = < 2 , 21 >, \quad , Ans7 = < -39 , -38 , -30 >, \quad , Ans8 = < 4 , 0 , 24 >$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{61}, 7.810]] \\ ans.2 = \begin{bmatrix} b = < -35 , 42 > \\ |b| = [7\sqrt{61}, 54.672] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = < 20 , -24 > \\ |c| = [4\sqrt{61}, 31.241] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = < 7 , 18 > \\ |a| = [6\sqrt{5}, 13.416] \\ |b| = [\sqrt{205}, 14.318] \\ |a + b| = [\sqrt{373}, 19.313] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = < -19 , 6 > \\ |a| = [6\sqrt{5}, 13.416] \\ |b| = [\sqrt{205}, 14.318] \\ |a - b| = [\sqrt{397}, 19.925] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < 0 , 14 , -18 > \\ |a| = [\sqrt{299}, 17.292] \\ |b| = [3\sqrt{11}, 9.950] \\ |a + b| = [2\sqrt{130}, 22.804] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = < 14 , 4 , -8 > \\ |a| = [\sqrt{299}, 17.292] \\ |b| = [3\sqrt{11}, 9.950] \\ |a - b| = [2\sqrt{69}, 16.613] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{85}, 9.220]) \\ ans.3 = (\theta = 49.399\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 212.005\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.12641

$$Ans1 = \begin{bmatrix} ans.2 = (AB = < -4 , 7 >) \\ ans.3 = (AB = -4\, i + 7\, j) \\ ans.4 = (|AB| = (\sqrt{65}, 8.062)) \\ ans.5 = (u = -0.496\, i + 0.868\, j) \\ ans.6 = (c = -2.481\, i + 4.341\, j) \\ ans.7 = (d = 3.969\, i - 6.946\, j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = < 11 , 4 >) \\ ans.3 = (AB = 11\, i + 4\, j) \\ ans.4 = (|AB| = (\sqrt{137}, 11.705)) \\ ans.5 = (u = 0.940\, i + 0.342\, j) \\ ans.6 = (c = 6.579\, i + 2.392\, j) \\ ans.7 = (d = -4.699\, i - 1.709\, j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = < -3 , 6 , 3 >) \\ ans.2 = (AB = -3\, i + 6\, j + 3\, k) \\ ans.3 = (|AB| = (3\sqrt{6}, 7.348)) \\ ans.4 = (u = -0.408\, i + 0.816\, j + 0.408\, k) \\ ans.5 = (c = -2.041\, i + 4.082\, j + 2.041\, k) \\ ans.6 = (d = 2.858\, i - 5.715\, j - 2.858\, k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = < 6 , 3 , -5 >) \\ ans.2 = (AB = 6\, i + 3\, j - 5\, k) \\ ans.3 = (|AB| = (\sqrt{70}, 8.367)) \\ ans.4 = (u = 0.717\, i + 0.359\, j - 0.598\, k) \\ ans.5 = (c = 4.303\, i + 2.151\, j - 3.586\, k) \\ ans.6 = (d = -5.020\, i - 2.510\, j + 4.183\, k) \end{bmatrix}$$

$$Ans5 = < 15 , 36 >, \quad , Ans6 = < 9 , -9 >, \quad , Ans7 = < -28 , 22 , -55 >, \quad , Ans8 = < -1 , -2 , -27 >$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{113}, 10.630]] \\ ans.2 = \begin{bmatrix} b = < -21 , 24 > \\ |b| = [3\sqrt{113}, 31.890] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = < 42 , -48 > \\ |c| = [6\sqrt{113}, 63.781] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = < -2 , 16 > \\ |a| = [2\sqrt{34}, 11.662] \\ |b| = [10, 10.000] \\ |a + b| = [2\sqrt{65}, 16.125] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = < 14 , 4 > \\ |a| = [2\sqrt{34}, 11.662] \\ |b| = [10, 10.000] \\ |a - b| = [2\sqrt{53}, 14.560] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < 8 , 1 , 2 > \\ |a| = [\sqrt{131}, 11.446] \\ |b| = [\sqrt{282}, 16.793] \\ |a + b| = [\sqrt{69}, 8.307] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = < -18 , 17 , -12 > \\ |a| = [\sqrt{131}, 11.446] \\ |b| = [\sqrt{282}, 16.793] \\ |a - b| = [\sqrt{757}, 27.514] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{145}, 12.042]) \\ ans.3 = (\theta = 48.366\ degrees) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{145}, 12.042]) \\ ans.3 = (\theta = 311.634\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.12674

$$Ans1 = \begin{bmatrix} ans.2 = (AB = < -3\ ,\ 4 >) \\ ans.3 = (AB = -3\ i + 4\ j) \\ ans.4 = (|AB| = (5, 5.000)) \\ ans.5 = (u = -0.600\ i + 0.800\ j) \\ ans.6 = (c = -4.800\ i + 6.400\ j) \\ ans.7 = (d = 3.000\ i - 4.000\ j) \end{bmatrix},\quad , Ans2 = \begin{bmatrix} ans.2 = (AB = < 4\ ,\ 10 >) \\ ans.3 = (AB = 4\ i + 10\ j) \\ ans.4 = (|AB| = (2\sqrt{29}, 10.770)) \\ ans.5 = (u = 0.371\ i + 0.928\ j) \\ ans.6 = (c = 1.857\ i + 4.642\ j) \\ ans.7 = (d = -3.343\ i - 8.356\ j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = < 3\ ,\ 3\ ,\ 4 >) \\ ans.2 = (AB = 3\ i + 3\ j + 4\ k) \\ ans.3 = (|AB| = (\sqrt{34}, 5.831)) \\ ans.4 = (u = 0.514\ i + 0.514\ j + 0.686\ k) \\ ans.5 = (c = 4.630\ i + 4.630\ j + 6.174\ k) \\ ans.6 = (d = -4.116\ i - 4.116\ j - 5.488\ k) \end{bmatrix},\quad , Ans4 = \begin{bmatrix} ans.1 = (AB = < 7\ ,\ -13\ ,\ 6 >) \\ ans.2 = (AB = 7\ i - 13\ j + 6\ k) \\ ans.3 = (|AB| = (\sqrt{254}, 15.937)) \\ ans.4 = (u = 0.439\ i - 0.816\ j + 0.376\ k) \\ ans.5 = (c = 3.514\ i - 6.526\ j + 3.012\ k) \\ ans.6 = (d = -3.953\ i + 7.341\ j - 3.388\ k) \end{bmatrix}$$

$$Ans5 = < 25\ ,\ -23 >,\quad , Ans6 = < 5\ ,\ 10 >,\quad , Ans7 = < -8\ ,\ 9\ ,\ -12 >,\quad , Ans8 = < -4\ ,\ 12\ ,\ 9 >$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{89}, 9.434]] \\ ans.2 = \begin{bmatrix} b = < 15\ ,\ -24 > \\ |b| = [3\sqrt{89}, 28.302] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = < -35\ ,\ 56 > \\ |c| = [7\sqrt{89}, 66.038] \end{bmatrix} \end{bmatrix},\quad , Ans10 = \begin{bmatrix} a + b = < 19\ ,\ -7 > \\ |a| = [\sqrt{85}, 9.220] \\ |b| = [\sqrt{313}, 17.692] \\ |a + b| = [\sqrt{410}, 20.248] \end{bmatrix},\quad , Ans11 = \begin{bmatrix} a - b = < -5\ ,\ 19 > \\ |a| = [\sqrt{85}, 9.220] \\ |b| = [\sqrt{313}, 17.692] \\ |a - b| = [\sqrt{386}, 19.647] \end{bmatrix},\quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < -4\ ,\ 18\ ,\ 14 > \\ |a| = [\sqrt{227}, 15.067] \\ |b| = [\sqrt{155}, 12.450] \\ |a + b| = [2\sqrt{134}, 23.152] \end{bmatrix},\quad , Ans13 = \begin{bmatrix} a - b = < 14\ ,\ 4\ ,\ 4 > \\ |a| = [\sqrt{227}, 15.067] \\ |b| = [\sqrt{155}, 12.450] \\ |a - b| = [2\sqrt{57}, 15.100] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 32.005\ degrees) \end{bmatrix},\quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{106}, 10.296]) \\ ans.3 = (\theta = 330.945\ degrees) \end{bmatrix}$$

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Vector01 Answers for No.12728

$$Ans1 = \begin{bmatrix} ans.2 = (AB = < -3 , 3 >) \\ ans.3 = (AB = -3\,i + 3\,j) \\ ans.4 = (|AB| = (3\sqrt{2}, 4.243)) \\ ans.5 = (u = -0.707\,i + 0.707\,j) \\ ans.6 = (c = -6.364\,i + 6.364\,j) \\ ans.7 = (d = 5.657\,i - 5.657\,j) \end{bmatrix}, \quad , Ans2 = \begin{bmatrix} ans.2 = (AB = < 8 , -5 >) \\ ans.3 = (AB = 8\,i - 5\,j) \\ ans.4 = (|AB| = (\sqrt{89}, 9.434)) \\ ans.5 = (u = 0.848\,i - 0.530\,j) \\ ans.6 = (c = 5.936\,i - 3.710\,j) \\ ans.7 = (d = -5.088\,i + 3.180\,j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = < -4 , -4 , -3 >) \\ ans.2 = (AB = -4\,i - 4\,j - 3\,k) \\ ans.3 = (|AB| = (\sqrt{41}, 6.403)) \\ ans.4 = (u = -0.625\,i - 0.625\,j - 0.469\,k) \\ ans.5 = (c = -3.748\,i - 3.748\,j - 2.811\,k) \\ ans.6 = (d = 5.622\,i + 5.622\,j + 4.217\,k) \end{bmatrix}, \quad , Ans4 = \begin{bmatrix} ans.1 = (AB = < 8 , -9 , 10 >) \\ ans.2 = (AB = 8\,i - 9\,j + 10\,k) \\ ans.3 = (|AB| = (7\sqrt{5}, 15.652)) \\ ans.4 = (u = 0.511\,i - 0.575\,j + 0.639\,k) \\ ans.5 = (c = 2.556\,i - 2.875\,j + 3.194\,k) \\ ans.6 = (d = -4.089\,i + 4.600\,j - 5.111\,k) \end{bmatrix}$$

$$Ans5 = < 34 , 6 >, \quad , Ans6 = < -28 , 12 >, \quad , Ans7 = < 36 , -10 , 29 >, \quad , Ans8 = < -2 , -7 , -10 >$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{89}, 9.434]] \\ ans.2 = \begin{bmatrix} b = < 20 , 32 > \\ |b| = [4\sqrt{89}, 37.736] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = < -30 , -48 > \\ |c| = [6\sqrt{89}, 56.604] \end{bmatrix} \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = < 16 , -4 > \\ |a| = [\sqrt{265}, 16.279] \\ |b| = [\sqrt{89}, 9.434] \\ |a + b| = [4\sqrt{17}, 16.492] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = < 6 , -20 > \\ |a| = [\sqrt{265}, 16.279] \\ |b| = [\sqrt{89}, 9.434] \\ |a - b| = [2\sqrt{109}, 20.881] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < 2 , -6 , -1 > \\ |a| = [\sqrt{267}, 16.340] \\ |b| = [\sqrt{166}, 12.884] \\ |a + b| = [\sqrt{41}, 6.403] \end{bmatrix}, \quad , Ans13 = \begin{bmatrix} a - b = < -16 , -20 , -13 > \\ |a| = [\sqrt{267}, 16.340] \\ |b| = [\sqrt{166}, 12.884] \\ |a - b| = [5\sqrt{33}, 28.723] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 57.995 \text{ degrees}) \end{bmatrix}, \quad , Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{145}, 12.042]) \\ ans.3 = (\theta = 228.366 \text{ degrees}) \end{bmatrix}$$

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