

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{74}, 8.602]) \\ ans.3 = (\theta = 54.462 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{74}, 8.602]) \\ ans.3 = (\theta = 144.462 \text{ degrees}) \end{bmatrix}$$

$$Ans1 = \begin{bmatrix} ans.2 = (AB = \langle -8, -8 \rangle) \\ ans.3 = (AB = -8i - 8j) \\ ans.4 = (|AB| = (8\sqrt{2}, 11.314)) \\ ans.5 = (u = -0.707i - 0.707j) \\ ans.6 = (c = -6.364i - 6.364j) \\ ans.7 = (d = 3.536i + 3.536j) \end{bmatrix}, \quad Ans2 = \begin{bmatrix} ans.2 = (AB = \langle 7, -8 \rangle) \\ ans.3 = (AB = 7i - 8j) \\ ans.4 = (|AB| = (\sqrt{113}, 10.630)) \\ ans.5 = (u = 0.659i - 0.753j) \\ ans.6 = (c = 3.293i - 3.763j) \\ ans.7 = (d = -5.268i + 6.021j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = \langle 3, -9, 6 \rangle) \\ ans.2 = (AB = 3i - 9j + 6k) \\ ans.3 = (|AB| = (3\sqrt{14}, 11.225)) \\ ans.4 = (u = 0.267i - 0.802j + 0.535k) \\ ans.5 = (c = 1.604i - 4.811j + 3.207k) \\ ans.6 = (d = -1.336i + 4.009j - 2.673k) \end{bmatrix}, Ans4 = \begin{bmatrix} ans.1 = (AB = \langle 18, -8, 13 \rangle) \\ ans.2 = (AB = 18i - 8j + 13k) \\ ans.3 = (|AB| = (\sqrt{557}, 23.601)) \\ ans.4 = (u = 0.763i - 0.339j + 0.551k) \\ ans.5 = (c = 4.576i - 2.034j + 3.305k) \\ ans.6 = (d = -6.101i + 2.712j - 4.407k) \end{bmatrix}$$

$$Ans5 = \langle 36, 35 \rangle, \quad Ans6 = \langle -19, 12 \rangle, \quad Ans7 = \langle 9, -10, -35 \rangle, \quad Ans8 = \langle 12, -29, -15 \rangle$$

$$Ans9 = \left[\begin{array}{l} ans.1 = [|a| = [\sqrt{130}, 11.402]] \\ ans.2 = \left[\begin{array}{l} b = < -49, 63 > \\ |b| = [7\sqrt{130}, 79.812] \end{array} \right] \\ ans.4 = \left[\begin{array}{l} c = < 42, -54 > \\ |c| = [6\sqrt{130}, 68.411] \end{array} \right] \end{array} \right], \quad Ans10 = \left[\begin{array}{l} a + b = < -3, 20 > \\ |a| = [5\sqrt{10}, 15.811] \\ |b| = [\sqrt{85}, 9.220] \\ |a + b| = [\sqrt{409}, 20.224] \end{array} \right], \quad Ans11 = \left[\begin{array}{l} a - b = < -15, 6 > \\ |a| = [5\sqrt{10}, 15.811] \\ |b| = [\sqrt{85}, 9.220] \\ |a - b| = [3\sqrt{29}, 16.155] \end{array} \right], \quad \left[\begin{array}{l} M \\ a \\ t \\ h \\ @ \\ MUT \end{array} \right]$$

$$Ans12 = \begin{bmatrix} a + b = \langle 13, 3, 3 \rangle \\ |a| = [\sqrt{149}, 12.207] \\ |b| = [\sqrt{206}, 14.353] \\ |a + b| = [\sqrt{187}, 13.675] \end{bmatrix}, \quad Ans13 = \begin{bmatrix} a - b = \langle 3, -15, -17 \rangle \\ |a| = [\sqrt{149}, 12.207] \\ |b| = [\sqrt{206}, 14.353] \\ |a - b| = [\sqrt{523}, 22.869] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{74}, 8.602]) \\ ans.3 = (\theta = 35.538 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 212.005 \text{ degrees}) \end{bmatrix}$$

$$Ans1 = \begin{bmatrix} ans.2 = (AB = \langle -5, 6 \rangle) \\ ans.3 = (AB = -5i + 6j) \\ ans.4 = (|AB| = (\sqrt{61}, 7.810)) \\ ans.5 = (u = -0.640i + 0.768j) \\ ans.6 = (c = -4.481i + 5.378j) \\ ans.7 = (d = 3.841i - 4.609j) \end{bmatrix}, Ans2 = \begin{bmatrix} ans.2 = (AB = \langle 3, -13 \rangle) \\ ans.3 = (AB = 3i - 13j) \\ ans.4 = (|AB| = (\sqrt{178}, 13.342)) \\ ans.5 = (u = 0.225i - 0.974j) \\ ans.6 = (c = 1.799i - 7.795j) \\ ans.7 = (d = -1.124i + 4.872j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = \langle -3, 6, 4 \rangle) \\ ans.2 = (AB = -3i + 6j + 4k) \\ ans.3 = (|AB| = (\sqrt{61}, 7.810)) \\ ans.4 = (u = -0.384i + 0.768j + 0.512k) \\ ans.5 = (c = -3.457i + 6.914j + 4.609k) \\ ans.6 = (d = 2.305i - 4.609j - 3.073k) \end{bmatrix}, Ans4 = \begin{bmatrix} ans.1 = (AB = \langle 14, -12, 6 \rangle) \\ ans.2 = (AB = 14i - 12j + 6k) \\ ans.3 = (|AB| = (2\sqrt{94}, 19.391)) \\ ans.4 = (u = 0.722i - 0.619j + 0.309k) \\ ans.5 = (c = 5.776i - 4.951j + 2.475k) \\ ans.6 = (d = -3.610i + 3.094j - 1.547k) \end{bmatrix}$$

$Ans5 = \langle -22, 25 \rangle$, $Ans6 = \langle -9, -10 \rangle$, $Ans7 = \langle -24, 13, 10 \rangle$, $Ans8 = \langle 20, -8, -21 \rangle$

$$Ans9 = \left[\begin{array}{l} ans.1 = [|a| = [\sqrt{74}, 8.602]] \\ ans.2 = \left[\begin{array}{l} b = \langle 49, -35 \rangle \\ |b| = [7\sqrt{74}, 60.216] \end{array} \right] \\ ans.4 = \left[\begin{array}{l} c = \langle -42, 30 \rangle \\ |c| = [6\sqrt{74}, 51.614] \end{array} \right] \end{array} \right], \quad Ans10 = \left[\begin{array}{l} a + b = \langle 14, -7 \rangle \\ |a| = [\sqrt{106}, 10.296] \\ |b| = [13, 13.000] \\ |a + b| = [7\sqrt{5}, 15.652] \end{array} \right], \quad Ans11 = \left[\begin{array}{l} a - b = \langle 4, 17 \rangle \\ |a| = [\sqrt{106}, 10.296] \\ |b| = [13, 13.000] \\ |a - b| = [\sqrt{305}, 17.464] \end{array} \right], \quad \left[\begin{array}{l} M \\ a \\ t \\ h \\ @ \\ MUT \end{array} \right]$$

$$Ans12 = \begin{bmatrix} a + b = < 16, 15, -3 > \\ |a| = [\sqrt{170}, 13.038] \\ |b| = [\sqrt{182}, 13.491] \\ |a + b| = [7\sqrt{10}, 22.136] \end{bmatrix}, \quad Ans13 = \begin{bmatrix} a - b = < -6, 3, -13 > \\ |a| = [\sqrt{170}, 13.038] \\ |b| = [\sqrt{182}, 13.491] \\ |a - b| = [\sqrt{214}, 14.629] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{85}, 9.220]) \\ ans.3 = (\theta = 40.601 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{85}, 9.220]) \\ ans.3 = (\theta = 229.399 \text{ degrees}) \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 32.005 \text{ degrees}) \end{bmatrix}, Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{145}, 12.042]) \\ ans.3 = (\theta = 228.366 \text{ degrees}) \end{bmatrix}$$

$$Ans1 = \begin{bmatrix} ans.2 = (AB = \langle -7, 5 \rangle) \\ ans.3 = (AB = -7i + 5j) \\ ans.4 = (|AB| = (\sqrt{74}, 8.602)) \\ ans.5 = (u = -0.814i + 0.581j) \\ ans.6 = (c = -7.324i + 5.231j) \\ ans.7 = (d = 4.882i - 3.487j) \end{bmatrix}, Ans2 = \begin{bmatrix} ans.2 = (AB = \langle -5, -6 \rangle) \\ ans.3 = (AB = -5i - 6j) \\ ans.4 = (|AB| = (\sqrt{61}, 7.810)) \\ ans.5 = (u = -0.640i - 0.768j) \\ ans.6 = (c = -5.121i - 6.146j) \\ ans.7 = (d = 5.762i + 6.914j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = \langle -10, 7, 3 \rangle) \\ ans.2 = (AB = -10i + 7j + 3k) \\ ans.3 = (|AB| = (\sqrt{158}, 12.570)) \\ ans.4 = (u = -0.796i + 0.557j + 0.239k) \\ ans.5 = (c = -7.160i + 5.012j + 2.148k) \\ ans.6 = (d = 5.569i - 3.898j - 1.671k) \end{bmatrix}, Ans4 = \begin{bmatrix} ans.1 = (AB = \langle -12, -18, 10 \rangle) \\ ans.2 = (AB = -12i - 18j + 10k) \\ ans.3 = (|AB| = (2\sqrt{142}, 23.833)) \\ ans.4 = (u = -0.504i - 0.755j + 0.420k) \\ ans.5 = (c = -4.028i - 6.042j + 3.357k) \\ ans.6 = (d = 4.532i + 6.797j - 3.776k) \end{bmatrix}$$

$$Ans5 = \langle 5, 25 \rangle, \quad Ans6 = \langle 18, -25 \rangle, \quad Ans7 = \langle 21, -11, -29 \rangle, \quad Ans8 = \langle -20, 30, -35 \rangle$$

$$Ans9 = \left[\begin{array}{l} ans.1 = [|a| = [\sqrt{85}, 9.220]] \\ ans.2 = [b = \langle -30, 35 \rangle] \\ ans.4 = [c = \langle 42, -49 \rangle] \\ ans.4 = [|c| = [7\sqrt{85}, 64.537]] \end{array} \right], \quad Ans10 = \left[\begin{array}{l} a + b = \langle 4, 15 \rangle \\ |a| = [\sqrt{149}, 12.207] \\ |b| = [10, 10.000] \\ |a + b| = [\sqrt{241}, 15.524] \end{array} \right], \quad Ans11 = \left[\begin{array}{l} a - b = \langle 16, -1 \rangle \\ |a| = [\sqrt{149}, 12.207] \\ |b| = [10, 10.000] \\ |a - b| = [\sqrt{257}, 16.031] \end{array} \right], \quad \left[\begin{array}{l} M \\ a \\ t \\ h \\ @ \\ MUT \end{array} \right]$$

$$Ans12 = \begin{bmatrix} a + b = \langle 17, 7, -1 \rangle \\ |a| = [3\sqrt{19}, 13.077] \\ |b| = [6\sqrt{6}, 14.697] \\ |a + b| = [\sqrt{339}, 18.412] \end{bmatrix}, \quad Ans13 = \begin{bmatrix} a - b = \langle 5, -17, 11 \rangle \\ |a| = [3\sqrt{19}, 13.077] \\ |b| = [6\sqrt{6}, 14.697] \\ |a - b| = [\sqrt{435}, 20.857] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{106}, 10.296]) \\ ans.3 = (\theta = 60.945 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 302.005 \text{ degrees}) \end{bmatrix}$$

$$Ans1 = \begin{bmatrix} ans.2 = (AB = \langle -6, 6 \rangle) \\ ans.3 = (AB = -6i + 6j) \\ ans.4 = (|AB| = (6\sqrt{2}, 8.485)) \\ ans.5 = (u = -0.707i + 0.707j) \\ ans.6 = (c = -5.657i + 5.657j) \\ ans.7 = (d = 4.950i - 4.950j) \end{bmatrix}, \quad Ans2 = \begin{bmatrix} ans.2 = (AB = \langle -11, 3 \rangle) \\ ans.3 = (AB = -11i + 3j) \\ ans.4 = (|AB| = (\sqrt{130}, 11.402)) \\ ans.5 = (u = -0.965i + 0.263j) \\ ans.6 = (c = -5.789i + 1.579j) \\ ans.7 = (d = 4.824i - 1.316j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = \langle -6, -8, 3 \rangle) \\ ans.2 = (AB = -6i - 8j + 3k) \\ ans.3 = (|AB| = (\sqrt{109}, 10.440)) \\ ans.4 = (u = -0.575i - 0.766j + 0.287k) \\ ans.5 = (c = -2.873i - 3.831j + 1.437k) \\ ans.6 = (d = 4.023i + 5.364j - 2.011k) \end{bmatrix}, Ans4 = \begin{bmatrix} ans.1 = (AB = \langle -13, -9, 7 \rangle) \\ ans.2 = (AB = -13i - 9j + 7k) \\ ans.3 = (|AB| = (\sqrt{299}, 17.292)) \\ ans.4 = (u = -0.752i - 0.520j + 0.405k) \\ ans.5 = (c = -5.263i - 3.643j + 2.834k) \\ ans.6 = (d = 6.766i + 4.684j - 3.643k) \end{bmatrix}$$

$$Ans5 = \langle 7, -14 \rangle, \quad Ans6 = \langle 55, -40 \rangle, \quad Ans7 = \langle -24, 2, 24 \rangle, \quad Ans8 = \langle -36, -10, -33 \rangle$$

$$Ans9 = \left[\begin{array}{l} ans.1 = [|a| = [\sqrt{130}, 11.402]] \\ ans.2 = [b = \langle -27, -21 \rangle] \\ ans.3 = [|b| = [3\sqrt{130}, 34.205]] \\ ans.4 = [c = \langle 63, 49 \rangle] \\ ans.5 = [|c| = [7\sqrt{130}, 79.812]] \end{array} \right], \quad Ans10 = \left[\begin{array}{l} a + b = \langle 20, 3 \rangle \\ |a| = [\sqrt{146}, 12.083] \\ |b| = [\sqrt{145}, 12.042] \\ |a + b| = [\sqrt{409}, 20.224] \end{array} \right], \quad Ans11 = \left[\begin{array}{l} a - b = \langle 2, -13 \rangle \\ |a| = [\sqrt{146}, 12.083] \\ |b| = [\sqrt{145}, 12.042] \\ |a - b| = [\sqrt{173}, 13.153] \end{array} \right], \quad \left[\begin{array}{l} M \\ a \\ t \\ h \\ @ \\ MUT \end{array} \right]$$

$$Ans12 = \begin{bmatrix} a+b = \langle 20, 16, -1 \rangle \\ |a| = [\sqrt{290}, 17.029] \\ |b| = [5\sqrt{5}, 11.180] \\ |a+b| = [3\sqrt{73}, 25.632] \end{bmatrix}, \quad Ans13 = \begin{bmatrix} a-b = \langle 4, 6, 11 \rangle \\ |a| = [\sqrt{290}, 17.029] \\ |b| = [5\sqrt{5}, 11.180] \\ |a-b| = [\sqrt{173}, 13.153] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{113}, 10.630]) \\ ans.3 = (\theta = 48.814 \text{ degrees}) \end{bmatrix}, Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{106}, 10.296]) \\ ans.3 = (\theta = 150.945 \text{ degrees}) \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{74}, 8.602]) \\ ans.3 = (\theta = 54.462 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{106}, 10.296]) \\ ans.3 = (\theta = 119.055 \text{ degrees}) \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{85}, 9.220]) \\ ans.3 = (\theta = 40.601 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 217.875 \text{ degrees}) \end{bmatrix}$$

$$Ans1 = \begin{bmatrix} ans.2 = (AB = \langle 6, -4 \rangle) \\ ans.3 = (AB = 6i - 4j) \\ ans.4 = (|AB| = (2\sqrt{13}, 7.211)) \\ ans.5 = (u = 0.832i - 0.555j) \\ ans.6 = (c = 4.992i - 3.328j) \\ ans.7 = (d = -5.824i + 3.883j) \end{bmatrix}, Ans2 = \begin{bmatrix} ans.2 = (AB = \langle -7, -5 \rangle) \\ ans.3 = (AB = -7i - 5j) \\ ans.4 = (|AB| = (\sqrt{74}, 8.602)) \\ ans.5 = (u = -0.814i - 0.581j) \\ ans.6 = (c = -5.696i - 4.069j) \\ ans.7 = (d = 4.069i + 2.906j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = \langle -3, 9, 7 \rangle) \\ ans.2 = (AB = -3i + 9j + 7k) \\ ans.3 = (|AB| = (\sqrt{139}, 11.790)) \\ ans.4 = (u = -0.254i + 0.763j + 0.594k) \\ ans.5 = (c = -2.036i + 6.107j + 4.750k) \\ ans.6 = (d = 2.290i - 6.870j - 5.344k) \end{bmatrix}, Ans4 = \begin{bmatrix} ans.1 = (AB = \langle -3, -7, -13 \rangle) \\ ans.2 = (AB = -3i - 7j - 13k) \\ ans.3 = (|AB| = (\sqrt{227}, 15.067)) \\ ans.4 = (u = -0.199i - 0.465j - 0.863k) \\ ans.5 = (c = -1.593i - 3.717j - 6.903k) \\ ans.6 = (d = 0.996i + 2.323j + 4.314k) \end{bmatrix}$$

$$Ans5 = \langle -38, -2 \rangle, \quad Ans6 = \langle -4, -36 \rangle, \quad Ans7 = \langle 39, -36, 28 \rangle, \quad Ans8 = \langle -6, 1, -14 \rangle$$

$$Ans9 = \begin{bmatrix} ans.1 = [a = [10, 10.000]] \\ ans.2 = [b = \langle -56, 42 \rangle] \\ ans.4 = [c = \langle 32, -24 \rangle] \\ [c = [40, 40.000]] \end{bmatrix}, \quad , Ans10 = \begin{bmatrix} a + b = \langle 17, 4 \rangle \\ |a| = [\sqrt{146}, 12.083] \\ |b| = [3\sqrt{13}, 10.817] \\ |a + b| = [\sqrt{305}, 17.464] \end{bmatrix}, \quad , Ans11 = \begin{bmatrix} a - b = \langle 5, -14 \rangle \\ |a| = [\sqrt{146}, 12.083] \\ |b| = [3\sqrt{13}, 10.817] \\ |a - b| = [\sqrt{221}, 14.866] \end{bmatrix}, \quad , \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < -15, 18, -5 > \\ |a| = [3\sqrt{17}, 12.369] \\ |b| = [\sqrt{249}, 15.780] \\ |a + b| = [\sqrt{574}, 23.958] \end{bmatrix}, \quad Ans13 = \begin{bmatrix} a - b = < -1, -2, 15 > \\ |a| = [3\sqrt{17}, 12.369] \\ |b| = [\sqrt{249}, 15.780] \\ |a - b| = [\sqrt{230}, 15.166] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{106}, 10.296]) \\ ans.3 = (\theta = 60.945 \text{ degrees}) \end{bmatrix}, Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{106}, 10.296]) \\ ans.3 = (\theta = 209.055 \text{ degrees}) \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{106}, 10.296]) \\ ans.3 = (\theta = 29.055 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 217.875 \text{ degrees}) \end{bmatrix}$$

$$Ans1 = \begin{bmatrix} ans.2 = (AB = \langle -7, 10 \rangle) \\ ans.3 = (AB = -7i + 10j) \\ ans.4 = (|AB| = (\sqrt{149}, 12.207)) \\ ans.5 = (u = -0.573i + 0.819j) \\ ans.6 = (c = -4.588i + 6.554j) \\ ans.7 = (d = 2.867i - 4.096j) \end{bmatrix}, Ans2 = \begin{bmatrix} ans.2 = (AB = \langle 3, -9 \rangle) \\ ans.3 = (AB = 3i - 9j) \\ ans.4 = (|AB| = (3\sqrt{10}, 9.487)) \\ ans.5 = (u = 0.316i - 0.949j) \\ ans.6 = (c = 2.214i - 6.641j) \\ ans.7 = (d = -2.530i + 7.589j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = \langle 4, 5, -5 \rangle) \\ ans.2 = (AB = 4i + 5j - 5k) \\ ans.3 = (|AB| = (\sqrt{66}, 8.124)) \\ ans.4 = (u = 0.492i + 0.615j - 0.615k) \\ ans.5 = (c = 4.431i + 5.539j - 5.539k) \\ ans.6 = (d = -3.939i - 4.924j + 4.924k) \end{bmatrix}, Ans4 = \begin{bmatrix} ans.1 = (AB = \langle -4, 5, -3 \rangle) \\ ans.2 = (AB = -4i + 5j - 3k) \\ ans.3 = (|AB| = (5\sqrt{2}, 7.071)) \\ ans.4 = (u = -0.566i + 0.707j - 0.424k) \\ ans.5 = (c = -3.394i + 4.243j - 2.546k) \\ ans.6 = (d = 4.525i - 5.657j + 3.394k) \end{bmatrix}$$

$$Ans5 = \langle 15, -13 \rangle, \quad Ans6 = \langle -50, 30 \rangle, \quad Ans7 = \langle -13, -4, 44 \rangle, \quad Ans8 = \langle 6, 13, -26 \rangle$$

$$Ans9 = \left[\begin{array}{l} ans.1 = [|a| = [\sqrt{89}, 9.434]] \\ ans.2 = \left[\begin{array}{l} b = \langle 32, 20 \rangle \\ |b| = [4\sqrt{89}, 37.736] \end{array} \right] \\ ans.4 = \left[\begin{array}{l} c = \langle -48, -30 \rangle \\ |c| = [6\sqrt{89}, 56.604] \end{array} \right] \end{array} \right], \quad Ans10 = \left[\begin{array}{l} a + b = \langle 5, 19 \rangle \\ |a| = [13, 13.000] \\ |b| = [\sqrt{149}, 12.207] \\ |a + b| = [\sqrt{386}, 19.647] \end{array} \right], \quad Ans11 = \left[\begin{array}{l} a - b = \langle -15, 5 \rangle \\ |a| = [13, 13.000] \\ |b| = [\sqrt{149}, 12.207] \\ |a - b| = [5\sqrt{10}, 15.811] \end{array} \right], \quad \left[\begin{array}{l} M \\ a \\ t \\ h \\ @ \\ MUT \end{array} \right]$$

$$Ans12 = \begin{bmatrix} a+b = <-1, -1, -1> \\ |a| = [\sqrt{211}, 14.526] \\ |b| = [10\sqrt{2}, 14.142] \\ |a+b| = [\sqrt{3}, 1.732] \end{bmatrix}, Ans13 = \begin{bmatrix} a-b = <-17, 19, -13> \\ |a| = [\sqrt{211}, 14.526] \\ |b| = [10\sqrt{2}, 14.142] \\ |a-b| = [3\sqrt{91}, 28.618] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{61}, 7.810]) \\ ans.3 = (\theta = 50.194 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{61}, 7.810]) \\ ans.3 = (\theta = 129.806 \text{ degrees}) \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{61}, 7.810]) \\ ans.3 = (\theta = 50.194 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 232.125 \text{ degrees}) \end{bmatrix}$$

$$Ans1 = \begin{bmatrix} ans.2 = (AB = \langle -5, 5 \rangle) \\ ans.3 = (AB = -5i + 5j) \\ ans.4 = (|AB| = (5\sqrt{2}, 7.071)) \\ ans.5 = (u = -0.707i + 0.707j) \\ ans.6 = (c = -3.536i + 3.536j) \\ ans.7 = (d = 5.657i - 5.657j) \end{bmatrix}, Ans2 = \begin{bmatrix} ans.2 = (AB = \langle 5, -3 \rangle) \\ ans.3 = (AB = 5i - 3j) \\ ans.4 = (|AB| = (\sqrt{34}, 5.831)) \\ ans.5 = (u = 0.857i - 0.514j) \\ ans.6 = (c = 7.717i - 4.630j) \\ ans.7 = (d = -5.145i + 3.087j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = \langle 5, 4, 6 \rangle) \\ ans.2 = (AB = 5i + 4j + 6k) \\ ans.3 = (|AB| = (\sqrt{77}, 8.775)) \\ ans.4 = (u = 0.570i + 0.456j + 0.684k) \\ ans.5 = (c = 5.128i + 4.103j + 6.154k) \\ ans.6 = (d = -2.849i - 2.279j - 3.419k) \end{bmatrix}, Ans4 = \begin{bmatrix} ans.1 = (AB = \langle -18, -3, 9 \rangle) \\ ans.2 = (AB = -18i - 3j + 9k) \\ ans.3 = (|AB| = (3\sqrt{46}, 20.347)) \\ ans.4 = (u = -0.885i - 0.147j + 0.442k) \\ ans.5 = (c = -7.962i - 1.327j + 3.981k) \\ ans.6 = (d = 4.423i + 0.737j - 2.212k) \end{bmatrix}$$

$$Ans5 = \langle -14, -5 \rangle, \quad Ans6 = \langle 21, 17 \rangle, \quad Ans7 = \langle 29, -27, -26 \rangle, \quad Ans8 = \langle 17, -37, 58 \rangle$$

$$Ans9 = \left[\begin{array}{l} ans.1 = [|a| = [\sqrt{89}, 9.434]] \\ ans.2 = [b = \langle -30, -48 \rangle] \\ ans.3 = [b = [6\sqrt{89}, 56.604]] \\ ans.4 = [c = \langle 15, 24 \rangle] \\ ans.5 = [c = [3\sqrt{89}, 28.302]] \end{array} \right], \quad Ans10 = \left[\begin{array}{l} a + b = \langle 3, 15 \rangle \\ |a| = [\sqrt{61}, 7.810] \\ |b| = [\sqrt{145}, 12.042] \\ a + b = [3\sqrt{26}, 15.297] \end{array} \right], \quad Ans11 = \left[\begin{array}{l} a - b = \langle -13, -3 \rangle \\ |a| = [\sqrt{61}, 7.810] \\ |b| = [\sqrt{145}, 12.042] \\ a - b = [\sqrt{178}, 13.342] \end{array} \right], \quad \left[\begin{array}{l} M \\ a \\ t \\ h \\ @ \\ MUT \end{array} \right]$$

$$Ans12 = \begin{bmatrix} a + b = \langle -1, -17, 14 \rangle \\ |a| = [5\sqrt{5}, 11.180] \\ |b| = [\sqrt{205}, 14.318] \\ |a + b| = [9\sqrt{6}, 22.045] \end{bmatrix}, \quad Ans13 = \begin{bmatrix} a - b = \langle -11, 7, 2 \rangle \\ |a| = [5\sqrt{5}, 11.180] \\ |b| = [\sqrt{205}, 14.318] \\ |a - b| = [\sqrt{174}, 13.191] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 57.995 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{145}, 12.042]) \\ ans.3 = (\theta = 138.366 \text{ degrees}) \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{85}, 9.220]) \\ ans.3 = (\theta = 40.601 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 127.875 \text{ degrees}) \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 52.125 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{85}, 9.220]) \\ ans.3 = (\theta = 130.601 \text{ degrees}) \end{bmatrix}$$

$$Ans1 = \begin{bmatrix} ans.2 = (AB = \langle -9, -3 \rangle) \\ ans.3 = (AB = -9i - 3j) \\ ans.4 = (|AB| = (3\sqrt{10}, 9.487)) \\ ans.5 = (u = -0.949i - 0.316j) \\ ans.6 = (c = -5.692i - 1.897j) \\ ans.7 = (d = 6.641i + 2.214j) \end{bmatrix}, \quad Ans2 = \begin{bmatrix} ans.2 = (AB = \langle 10, 3 \rangle) \\ ans.3 = (AB = 10i + 3j) \\ ans.4 = (|AB| = (\sqrt{109}, 10.440)) \\ ans.5 = (u = 0.958i + 0.287j) \\ ans.6 = (c = 8.620i + 2.586j) \\ ans.7 = (d = -5.747i - 1.724j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = \langle 3, 6, 4 \rangle) \\ ans.2 = (AB = 3i + 6j + 4k) \\ ans.3 = (|AB| = (\sqrt{61}, 7.810)) \\ ans.4 = (u = 0.384i + 0.768j + 0.512k) \\ ans.5 = (c = 3.073i + 6.146j + 4.097k) \\ ans.6 = (d = -3.457i - 6.914j - 4.609k) \end{bmatrix}, Ans4 = \begin{bmatrix} ans.1 = (AB = \langle -14, 13, -7 \rangle) \\ ans.2 = (AB = -14i + 13j - 7k) \\ ans.3 = (|AB| = (3\sqrt{46}, 20.347)) \\ ans.4 = (u = -0.688i + 0.639j - 0.344k) \\ ans.5 = (c = -4.128i + 3.833j - 2.064k) \\ ans.6 = (d = 5.504i - 5.111j + 2.752k) \end{bmatrix}$$

$$Ans5 = \langle 34, 24 \rangle, \quad Ans6 = \langle -17, -10 \rangle, \quad Ans7 = \langle 27, 41, 30 \rangle, \quad Ans8 = \langle -24, 16, 14 \rangle$$

$$Ans9 = \left[\begin{array}{l} ans.1 = [|a| = [\sqrt{145}, 12.042]] \\ ans.2 = \left[\begin{array}{l} b = \langle 36, 32 \rangle \\ |b| = [4\sqrt{145}, 48.166] \end{array} \right] \\ ans.4 = \left[\begin{array}{l} c = \langle -45, -40 \rangle \\ |c| = [5\sqrt{145}, 60.208] \end{array} \right] \end{array} \right], \quad , Ans10 = \left[\begin{array}{l} a + b = \langle 20, 8 \rangle \\ |a| = [\sqrt{146}, 12.083] \\ |b| = [5\sqrt{10}, 15.811] \\ |a + b| = [4\sqrt{29}, 21.541] \end{array} \right], \quad , Ans11 = \left[\begin{array}{l} a - b = \langle 2, -18 \rangle \\ |a| = [\sqrt{146}, 12.083] \\ |b| = [5\sqrt{10}, 15.811] \\ |a - b| = [2\sqrt{82}, 18.111] \end{array} \right], \quad \left[\begin{array}{l} M \\ a \\ t \\ h \\ @ \\ MUT \end{array} \right]$$

$$Ans12 = \begin{bmatrix} a + b = < 14, 17, -16 > \\ |a| = [\sqrt{266}, 16.310] \\ |b| = [\sqrt{131}, 11.446] \\ |a + b| = [\sqrt{741}, 27.221] \end{bmatrix}, \quad Ans13 = \begin{bmatrix} a - b = < 4, -1, -6 > \\ |a| = [\sqrt{266}, 16.310] \\ |b| = [\sqrt{131}, 11.446] \\ |a - b| = [\sqrt{53}, 7.280] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{145}, 12.042]) \\ ans.3 = (\theta = 41.634 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{106}, 10.296]) \\ ans.3 = (\theta = 209.055 \text{ degrees}) \end{bmatrix}$$

$$Ans1 = \begin{bmatrix} ans.2 = (AB = \langle 6, 6 \rangle) \\ ans.3 = (AB = 6i + 6j) \\ ans.4 = (|AB| = (6\sqrt{2}, 8.485)) \\ ans.5 = (u = 0.707i + 0.707j) \\ ans.6 = (c = 6.364i + 6.364j) \\ ans.7 = (d = -3.536i - 3.536j) \end{bmatrix}, \quad Ans2 = \begin{bmatrix} ans.2 = (AB = \langle 10, 5 \rangle) \\ ans.3 = (AB = 10i + 5j) \\ ans.4 = (|AB| = (5\sqrt{5}, 11.180)) \\ ans.5 = (u = 0.894i + 0.447j) \\ ans.6 = (c = 5.367i + 2.683j) \\ ans.7 = (d = -4.472i - 2.236j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = \langle 5, -5, -4 \rangle) \\ ans.2 = (AB = 5i - 5j - 4k) \\ ans.3 = (|AB| = (\sqrt{66}, 8.124)) \\ ans.4 = (u = 0.615i - 0.615j - 0.492k) \\ ans.5 = (c = 5.539i - 5.539j - 4.431k) \\ ans.6 = (d = -3.693i + 3.693j + 2.954k) \end{bmatrix}, Ans4 = \begin{bmatrix} ans.1 = (AB = \langle 4, 6, -8 \rangle) \\ ans.2 = (AB = 4i + 6j - 8k) \\ ans.3 = (|AB| = (2\sqrt{29}, 10.770)) \\ ans.4 = (u = 0.371i + 0.557j - 0.743k) \\ ans.5 = (c = 3.343i + 5.014j - 6.685k) \\ ans.6 = (d = -1.857i - 2.785j + 3.714k) \end{bmatrix}$$

$$Ans5 = \langle 27, 7 \rangle, \quad Ans6 = \langle 30, -22 \rangle, \quad Ans7 = \langle 33, -22, -17 \rangle, \quad Ans8 = \langle -11, -6, 3 \rangle$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{61}, 7.810]] \\ ans.2 = \begin{bmatrix} b = \langle 36, -30 \rangle \\ |b| = [6\sqrt{61}, 46.861] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = \langle -30, 25 \rangle \\ |c| = [5\sqrt{61}, 39.051] \end{bmatrix} \end{bmatrix}, \quad Ans10 = \begin{bmatrix} a + b = \langle 5, 11 \rangle \\ |a| = [\sqrt{85}, 9.220] \\ |b| = [13, 13.000] \\ |a + b| = [\sqrt{146}, 12.083] \end{bmatrix}, \quad Ans11 = \begin{bmatrix} a - b = \langle -19, 1 \rangle \\ |a| = [\sqrt{85}, 9.220] \\ |b| = [13, 13.000] \\ |a - b| = [\sqrt{362}, 19.026] \end{bmatrix}, \quad \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = \langle -3, -15, 19 \rangle \\ |a| = [\sqrt{221}, 14.866] \\ |b| = [\sqrt{170}, 13.038] \\ |a + b| = [\sqrt{595}, 24.393] \end{bmatrix}, \quad Ans13 = \begin{bmatrix} a - b = \langle -13, 3, 3 \rangle \\ |a| = [\sqrt{221}, 14.866] \\ |b| = [\sqrt{170}, 13.038] \\ |a - b| = [\sqrt{187}, 13.675] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{74}, 8.602]) \\ ans.3 = (\theta = 35.538 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 217.875 \text{ degrees}) \end{bmatrix}$$

$$Ans1 = \begin{bmatrix} ans.2 = (AB = \langle -4, 7 \rangle) \\ ans.3 = (AB = -4i + 7j) \\ ans.4 = (|AB| = (\sqrt{65}, 8.062)) \\ ans.5 = (u = -0.496i + 0.868j) \\ ans.6 = (c = -2.481i + 4.341j) \\ ans.7 = (d = 2.977i - 5.209j) \end{bmatrix}, Ans2 = \begin{bmatrix} ans.2 = (AB = \langle -10, -4 \rangle) \\ ans.3 = (AB = -10i - 4j) \\ ans.4 = (|AB| = (2\sqrt{29}, 10.770)) \\ ans.5 = (u = -0.928i - 0.371j) \\ ans.6 = (c = -6.499i - 2.600j) \\ ans.7 = (d = 4.642i + 1.857j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = \langle -5, 7, -3 \rangle) \\ ans.2 = (AB = -5i + 7j - 3k) \\ ans.3 = (|AB| = (\sqrt{83}, 9.110)) \\ ans.4 = (u = -0.549i + 0.768j - 0.329k) \\ ans.5 = (c = -3.293i + 4.610j - 1.976k) \\ ans.6 = (d = 4.391i - 6.147j + 2.634k) \end{bmatrix}, Ans4 = \begin{bmatrix} ans.1 = (AB = \langle 8, -18, 5 \rangle) \\ ans.2 = (AB = 8i - 18j + 5k) \\ ans.3 = (|AB| = (\sqrt{413}, 20.322)) \\ ans.4 = (u = 0.394i - 0.886j + 0.246k) \\ ans.5 = (c = 3.543i - 7.971j + 2.214k) \\ ans.6 = (d = -3.149i + 7.086j - 1.968k) \end{bmatrix}$$

$$Ans5 = \langle 31, -22 \rangle, \quad Ans6 = \langle -39, -21 \rangle, \quad Ans7 = \langle 10, -16, 14 \rangle, \quad Ans8 = \langle -25, 26, 19 \rangle$$

$$Ans9 = \begin{bmatrix} ans.1 = [|a| = [\sqrt{74}, 8.602]] \\ ans.2 = \begin{bmatrix} b = \langle 30, -42 \rangle \\ |b| = [6\sqrt{74}, 51.614] \end{bmatrix} \\ ans.4 = \begin{bmatrix} c = \langle -35, 49 \rangle \\ |c| = [7\sqrt{74}, 60.216] \end{bmatrix} \end{bmatrix}, \quad Ans10 = \begin{bmatrix} a + b = \langle 14, -4 \rangle \\ |a| = [\sqrt{146}, 12.083] \\ |b| = [\sqrt{130}, 11.402] \\ |a + b| = [2\sqrt{53}, 14.560] \end{bmatrix}, \quad Ans11 = \begin{bmatrix} a - b = \langle -4, -18 \rangle \\ |a| = [\sqrt{146}, 12.083] \\ |b| = [\sqrt{130}, 11.402] \\ |a - b| = [2\sqrt{85}, 18.439] \end{bmatrix}, \quad \begin{bmatrix} M \\ a \\ t \\ h \\ @ \\ MUT \end{bmatrix}$$

$$Ans12 = \begin{bmatrix} a + b = < 2, 19, -13 > \\ |a| = [\sqrt{138}, 11.747] \\ |b| = [\sqrt{210}, 14.491] \\ |a + b| = [\sqrt{534}, 23.108] \end{bmatrix}, \quad Ans13 = \begin{bmatrix} a - b = < 12, -3, 3 > \\ |a| = [\sqrt{138}, 11.747] \\ |b| = [\sqrt{210}, 14.491] \\ |a - b| = [9\sqrt{2}, 12.728] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{113}, 10.630]) \\ ans.3 = (\theta = 41.186 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{89}, 9.434]) \\ ans.3 = (\theta = 122.005 \text{ degrees}) \end{bmatrix}$$

$$Ans1 = \begin{bmatrix} ans.2 = (AB = \langle -7, -3 \rangle) \\ ans.3 = (AB = -7i - 3j) \\ ans.4 = (|AB| = (\sqrt{58}, 7.616)) \\ ans.5 = (u = -0.919i - 0.394j) \\ ans.6 = (c = -4.596i - 1.970j) \\ ans.7 = (d = 8.272i + 3.545j) \end{bmatrix}, Ans2 = \begin{bmatrix} ans.2 = (AB = \langle 3, 12 \rangle) \\ ans.3 = (AB = 3i + 12j) \\ ans.4 = (|AB| = (3\sqrt{17}, 12.369)) \\ ans.5 = (u = 0.243i + 0.970j) \\ ans.6 = (c = 1.698i + 6.791j) \\ ans.7 = (d = -1.213i - 4.851j) \end{bmatrix}$$

$$Ans3 = \begin{bmatrix} ans.1 = (AB = \langle 9, -10, 3 \rangle) \\ ans.2 = (AB = 9i - 10j + 3k) \\ ans.3 = (|AB| = (\sqrt{190}, 13.784)) \\ ans.4 = (u = 0.653i - 0.725j + 0.218k) \\ ans.5 = (c = 3.265i - 3.627j + 1.088k) \\ ans.6 = (d = -3.918i + 4.353j - 1.306k) \end{bmatrix}, Ans4 = \begin{bmatrix} ans.1 = (AB = \langle 5, 4, 8 \rangle) \\ ans.2 = (AB = 5i + 4j + 8k) \\ ans.3 = (|AB| = (\sqrt{105}, 10.247)) \\ ans.4 = (u = 0.488i + 0.390j + 0.781k) \\ ans.5 = (c = 2.928i + 2.342j + 4.684k) \\ ans.6 = (d = -3.904i - 3.123j - 6.246k) \end{bmatrix}$$

$$Ans5 = \langle -9, -27 \rangle, \quad Ans6 = \langle 6, 15 \rangle, \quad Ans7 = \langle -70, -50, -12 \rangle, \quad Ans8 = \langle 40, -42, 16 \rangle$$

$$Ans9 = \left[\begin{array}{l} ans.1 = [|a| = [3\sqrt{13}, 10.817]] \\ ans.2 = [b = \langle 27, 18 \rangle \\ |b| = [9\sqrt{13}, 32.450]] \\ ans.4 = [c = \langle -45, -30 \rangle \\ |c| = [15\sqrt{13}, 54.083]] \end{array} \right], \quad , Ans10 = \left[\begin{array}{l} a + b = \langle 13, 1 \rangle \\ |a| = [\sqrt{89}, 9.434] \\ |b| = [\sqrt{113}, 10.630] \\ a + b = [\sqrt{170}, 13.038] \end{array} \right], \quad , Ans11 = \left[\begin{array}{l} a - b = \langle -3, 15 \rangle \\ |a| = [\sqrt{89}, 9.434] \\ |b| = [\sqrt{113}, 10.630] \\ a - b = [3\sqrt{26}, 15.297] \end{array} \right], \quad \left[\begin{array}{l} M \\ a \\ t \\ h \\ @ \\ MUT \end{array} \right]$$

$$Ans12 = \begin{bmatrix} a + b = < -1, -2, 5 > \\ |a| = [\sqrt{142}, 11.916] \\ |b| = [3\sqrt{22}, 14.071] \\ |a + b| = [\sqrt{30}, 5.477] \end{bmatrix}, \quad Ans13 = \begin{bmatrix} a - b = < 13, -16, -15 > \\ |a| = [\sqrt{142}, 11.916] \\ |b| = [3\sqrt{22}, 14.071] \\ |a - b| = [5\sqrt{26}, 25.495] \end{bmatrix}$$

$$Ans14 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{130}, 11.402]) \\ ans.3 = (\theta = 37.875 \text{ degrees}) \end{bmatrix}, \quad Ans15 = \begin{bmatrix} ans.2 = (|a| = [\sqrt{145}, 12.042]) \\ ans.3 = (\theta = 131.634 \text{ degrees}) \end{bmatrix}$$

[illegible]