代数学幾何学 (A/B) 計算演習 [問題] (2009/05/07)

問. 次の点と平面の間の距離を求めなさい

Q.1

$(-4, -5, -3)$, $2x + 5y - 2z = 0$

Q.2

$(-4, -4, 0)$, $2x + 5z = 3$

Q.3

$(-4, -4, -3)$, $5x + 5y = 2$

Q.4

$(2, 4, 2)$, $x - y - z = -3$

Q.5

$(3, 1, 4)$, $5x + 3y - z = -4$

Q.6

$(0, -3, 3)$, $x + y + z = -4$

Q.7

$(-4, 3, 2)$, $3y - 3z = -5$

Q.8

$(1, -3, 2)$, $3x - 4z = -3$

Q.9

$(2, -2, 5)$, $3x + 2y + 4z = 3$

Q.10

$(-4, 4, -5)$, $3x - 5y = 2$

Q.11

$(2, -2, 2)$, $x = -5$

Q.12

$(-5, -1, 3)$, $5y + z = -5$

Q.13

$(1, -2, 0)$, $x + 2y - z = -5$

Q.14

$(-5, 4, -5)$, $x + 2y + 2z = 1$

Q.15

$(-4, 4, -2)$, $x + 2y - 5z = -1$

Q.16

$(0, 0, 5)$, $5x - 4y - 3z = -1$

Q.17

$(0, 1, 0)$, $5x - 3y + 4z = 5$

Q.18

$(-3, 0, 4)$, $2x - 4y + z = 1$

代数学幾何学 (A/B) 計算演習 [解答] (2009/05/07)

A.1

$$\frac{9\sqrt{33}}{11}$$

A.2

$$\frac{11\sqrt{29}}{29}$$

A.3

$$\frac{21\sqrt{2}}{5}$$

A.4

$$\frac{\sqrt{3}}{3}$$

A.5

$$\frac{18\sqrt{35}}{35}$$

A.6

$$\frac{4\sqrt{3}}{3}$$

A.7

$$\frac{4\sqrt{2}}{3}$$

A.8

$$\frac{2}{5}$$

A.9

$$\frac{19\sqrt{29}}{29}$$

A.10

$$\sqrt{34}$$

A.11

$$7$$

A.12

$$\frac{3\sqrt{26}}{26}$$

A.13

$$\frac{\sqrt{6}}{3}$$

A.14

$$\frac{8}{3}$$

A.15

$$\frac{\sqrt{30}}{2}$$

A.16

$$\frac{7\sqrt{2}}{5}$$

A.17

$$\frac{4\sqrt{2}}{5}$$

A.18

$$\frac{\sqrt{21}}{7}$$