Kristen
Ben
Andrew
Allison

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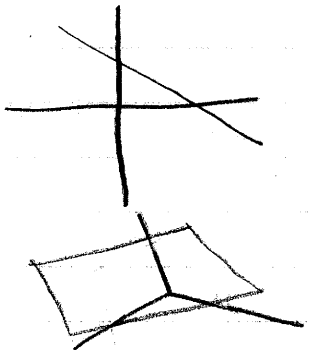
5) $x+y=2$



11) $(x-1)^2+(y+4)^2+(z-3)^2=25$

$(x-1)^2+(z-3)^2=9$

$y=0$

13) $(x-3)^2+(y-8)^2+(z-1)^2=d^2$

$(4-3)^2+(3-8)^2+(-1-1)^2=d^2$

$1^2+(-5)^2+(-2)^2=d^2$

$= 25+6=d^2$

$d=\sqrt{30}$

$(x-3)^2+(y-8)^2+(z-1)^2=30$

27) $0 \le z \le 6$

horizontal space between 0 & 6

29) $x^2+y^2+z^2>1$

all points outside of sphere

$k=0 \quad c=(0,0,0)$

33) $x^2+z^2 \le 9$

all points inside of cylinder on y-axis

$k=3 \quad c=0,0,0$

35) $y<0$

37) $r< x^2+y^2+z^2<k$

Group Work 4-22

Andy Chleborad
Tanner Burt
Justin Ashley

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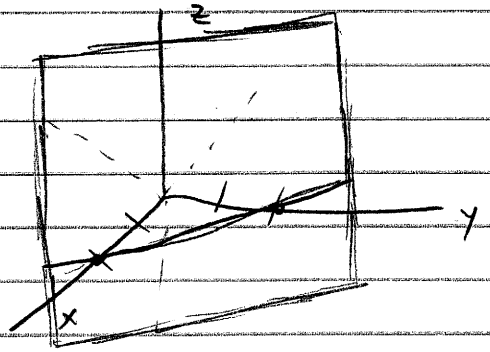
5. $x+y=2$



It is a plane

11. $(1,-4,3)$ radius 5

$d^2 = (x_2-x_1)^2 + (y_2-y_1)^2 + (z_2-z_1)^2$

$25 = (x-1)^2 + (y+4)^2 + (z-3)^2$

$25 = (x-1)^2 + (4)^2 + (z-3)^2$

$25 = (x-1)^2 + 16 + (z-3)^2$

$9 = (x-1)^2 + (z-3)^2$

13. center $(3,8,1)$ point $(4,3,-1)$

$d = \sqrt{(3-4)^2 + (8-3)^2 + (1+1)^2}$

$= \sqrt{(-1)^2 + (5)^2 + (2)^2}$

$= \sqrt{1+25+4}$

$= \sqrt{30}$

$30 = (x-3)^2 + (y-8)^2 + (z-1)^2$

27. $0 \le z \le 6$

Plane of all possible points between $z=0$ and $z=6$

29. $x^2+y^2+z^2 > 1$

All points outside a sphere with a radius of 1 and center at 0

35. Points when y is negative

$y < 0$

37. $r^2 < x^2+y^2+z^2 < R^2$

Adam B., Will R., Thomas S.
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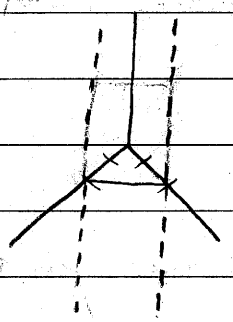
#5. $x+y=2$

$y=2-x$



Plane that satisfies $y=2-x$, z can be any number.

#11. Equation of Sphere:

$(x-1)^2+(y+4)^2+(z-3)^2=25$

Intersection of xz-plane:

$(x-1)^2+(z-3)^2=9$

#13. $r=\sqrt{(3-4)^2+(8-3)^2+(1+1)^2}$

$r=\sqrt{1+25+4}$

$r=\sqrt{30}$

Equation of sphere:

$(x-3)^2+(y-8)^2+(z-1)^2=30$