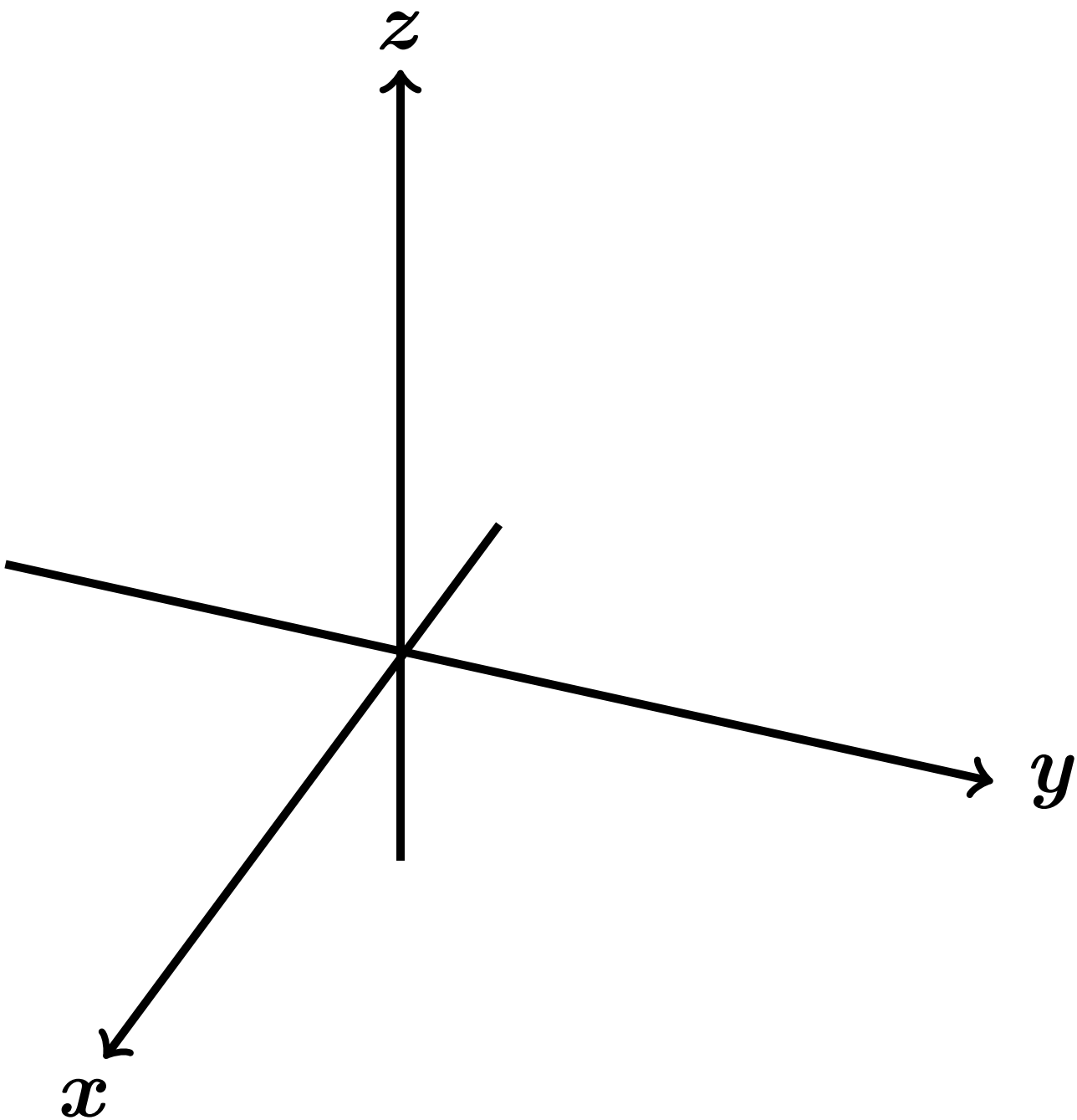
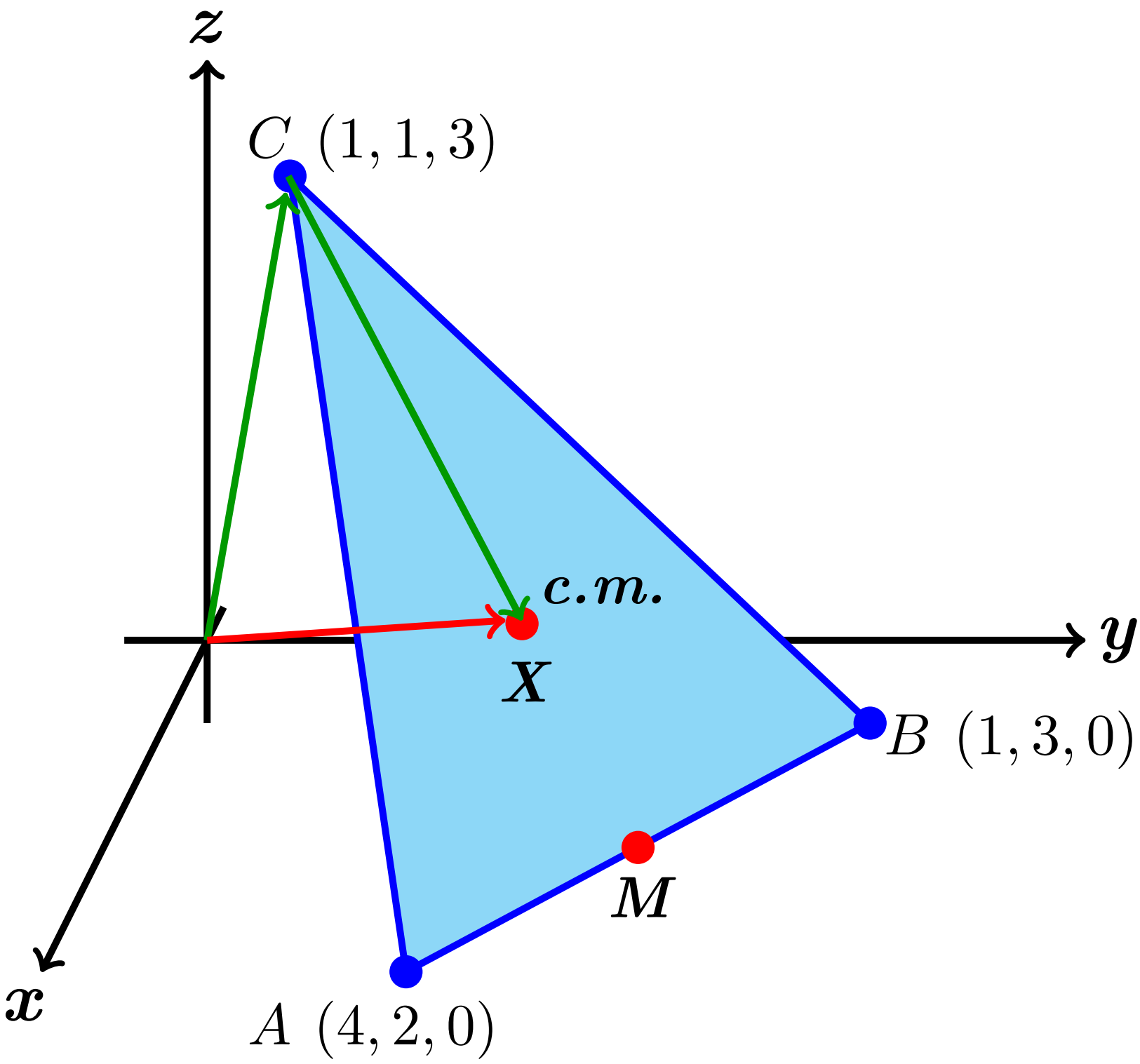
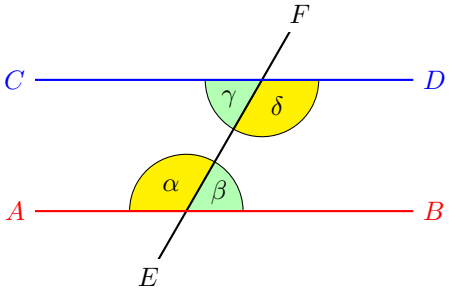
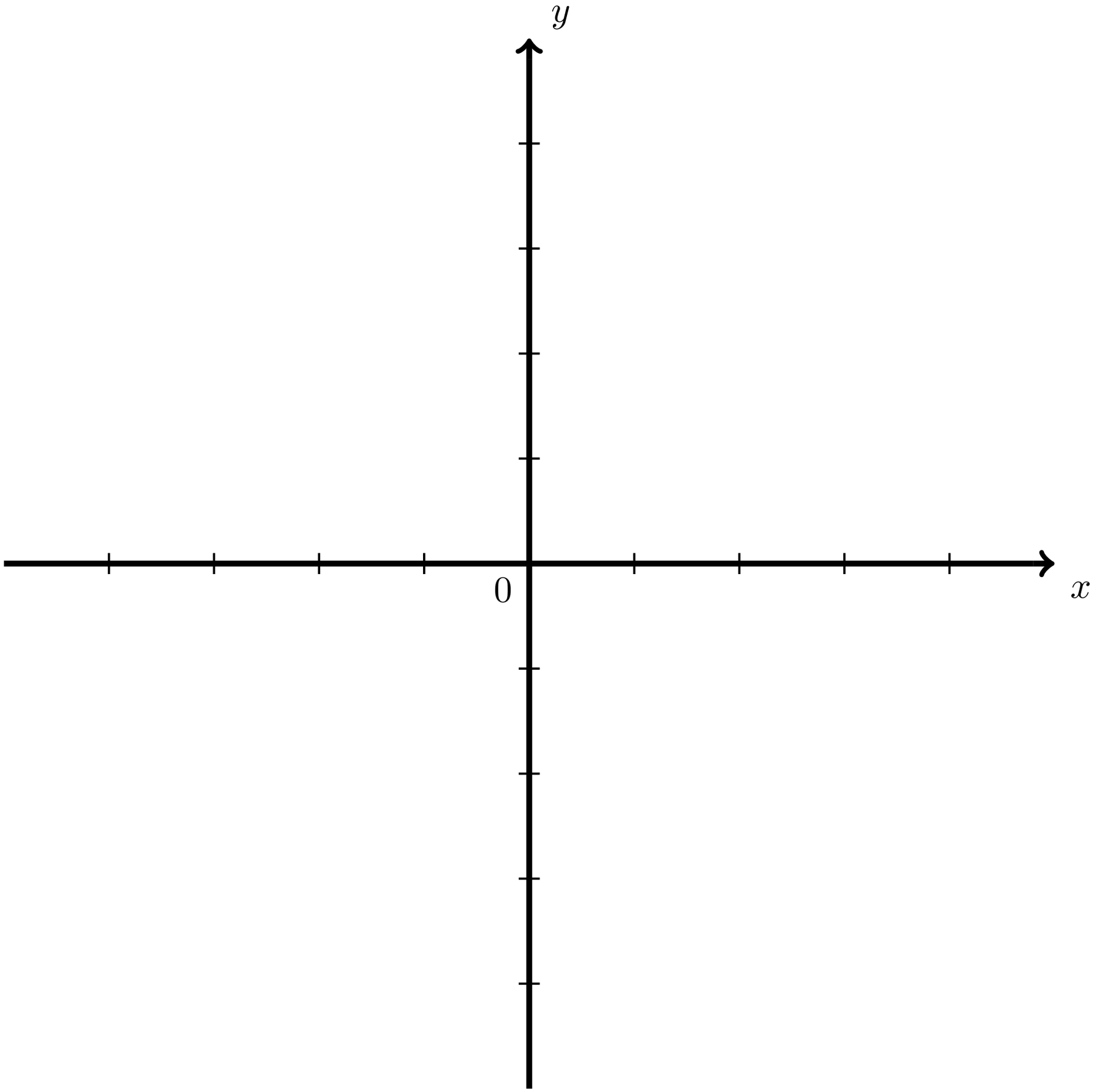
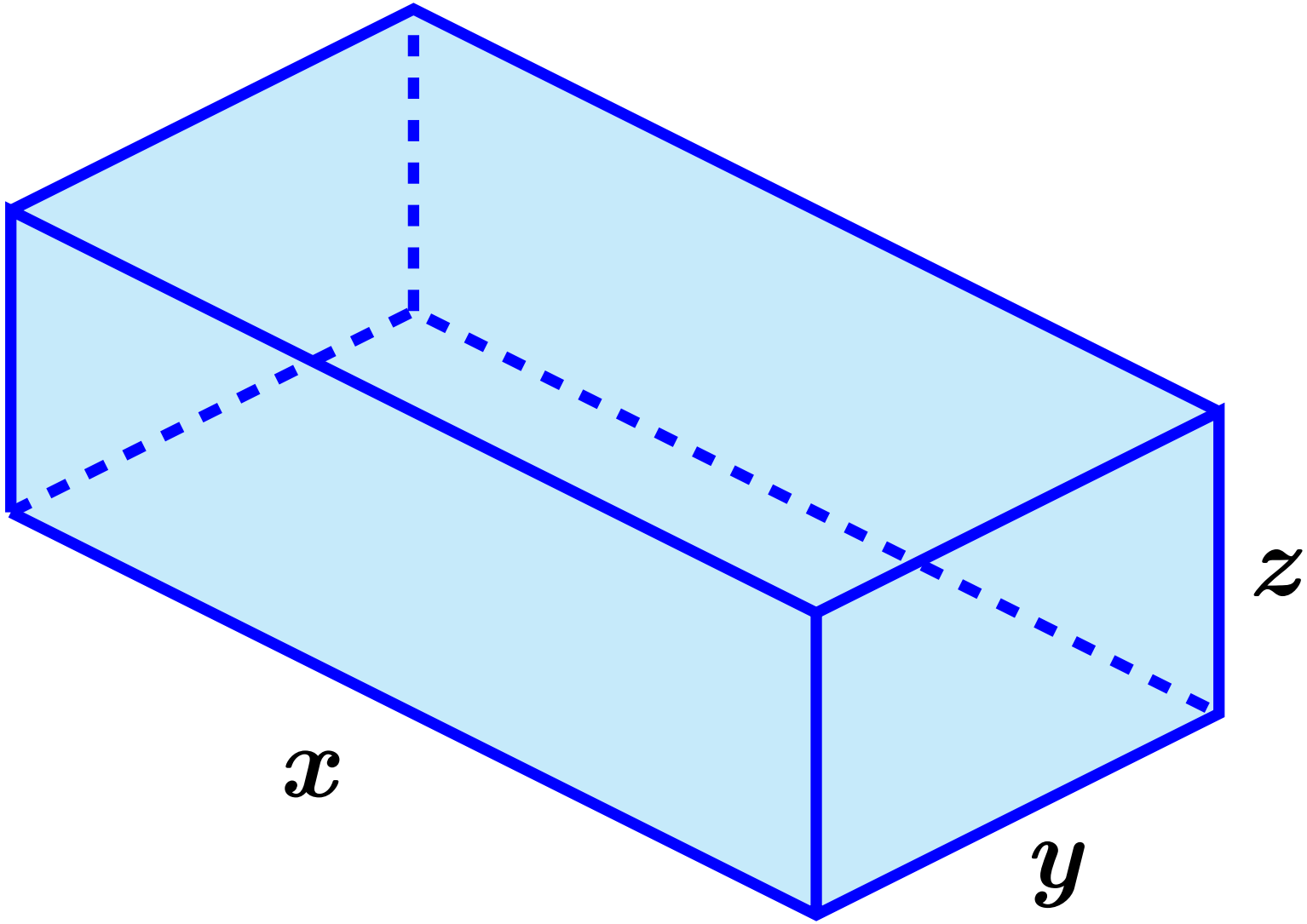

z
y
x

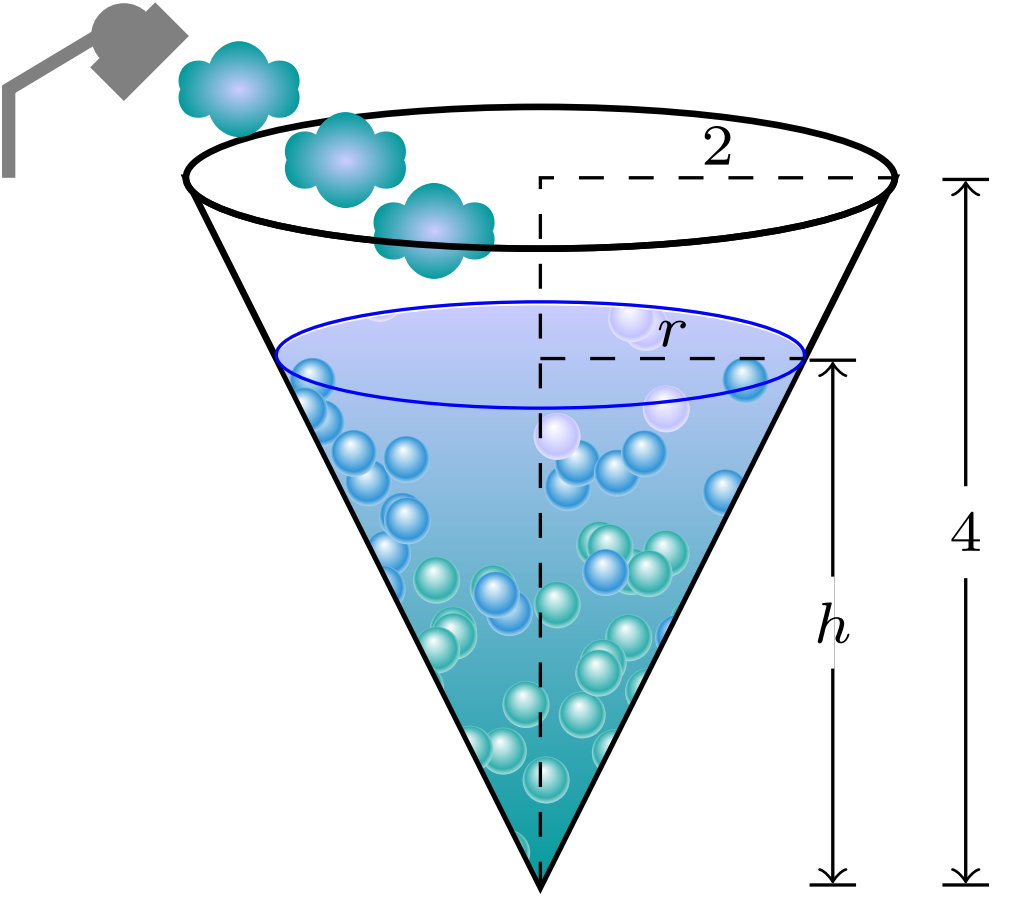

z
C (1, 1, 3)
c.m.
X
y
B (1, 3, 0)
M
x
A (4, 2, 0)

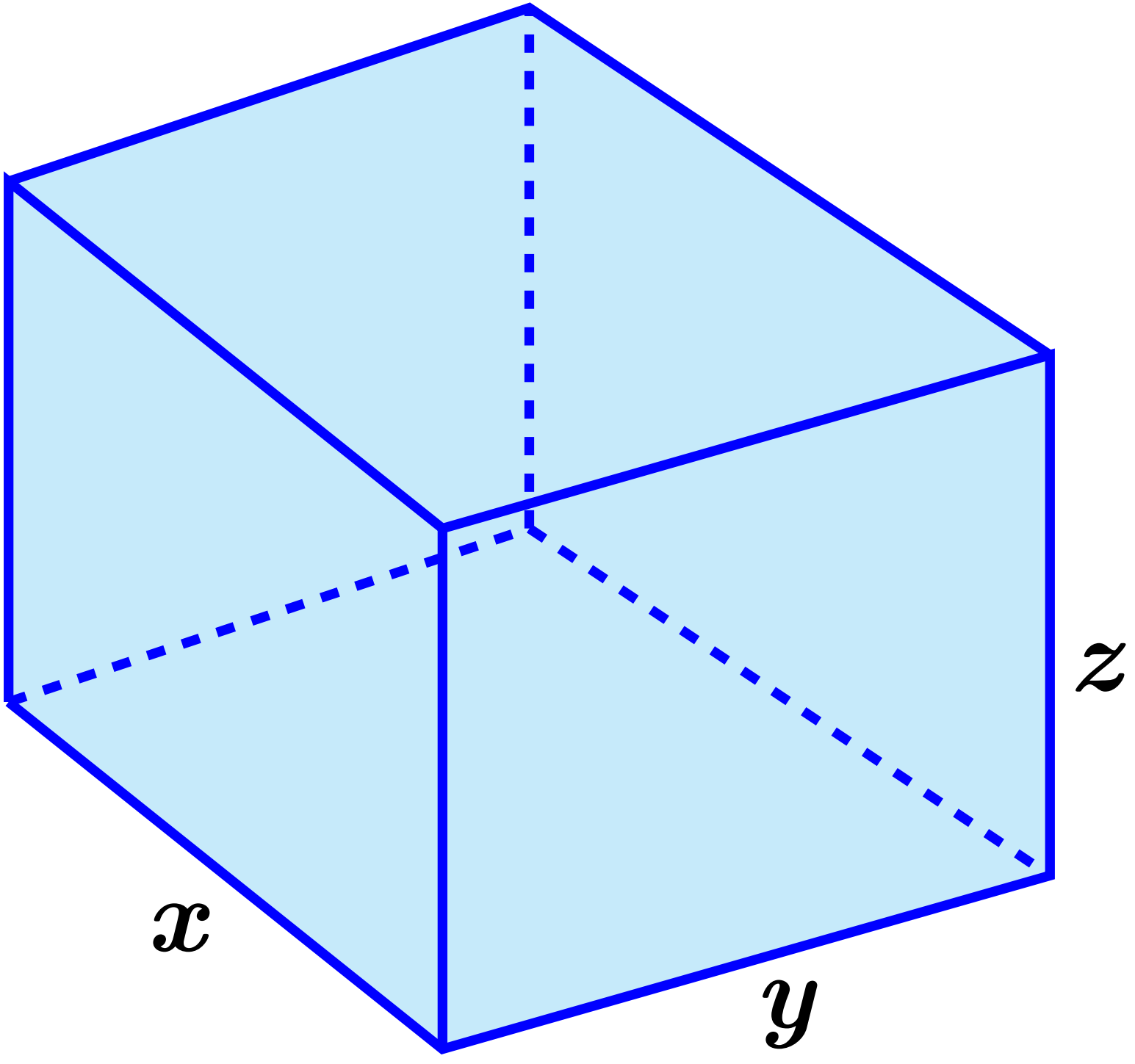


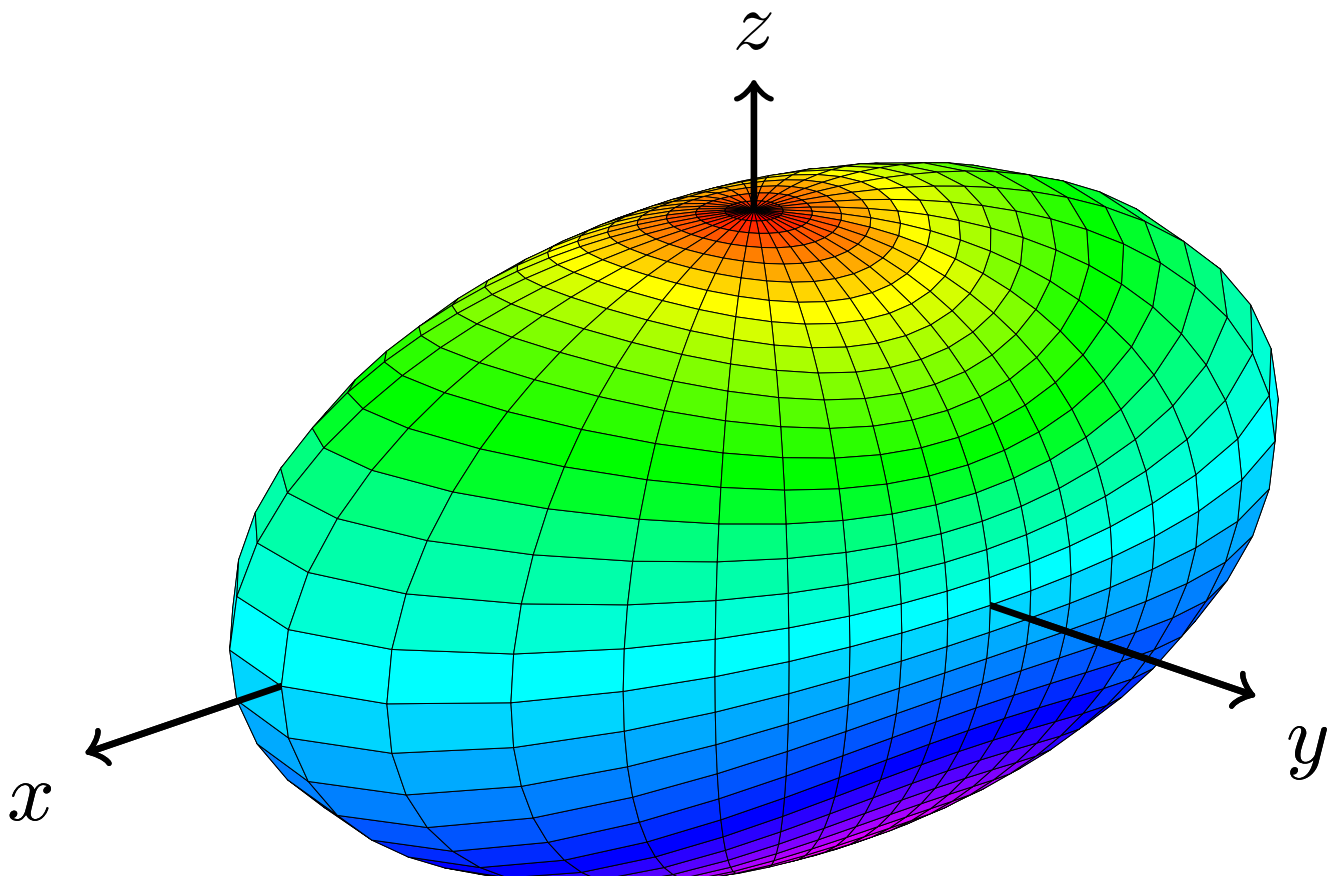
When we assume that AB and CD are parallel, i. e., $AB \parallel CD$, then $\alpha = \delta$ and $\beta = \gamma$.

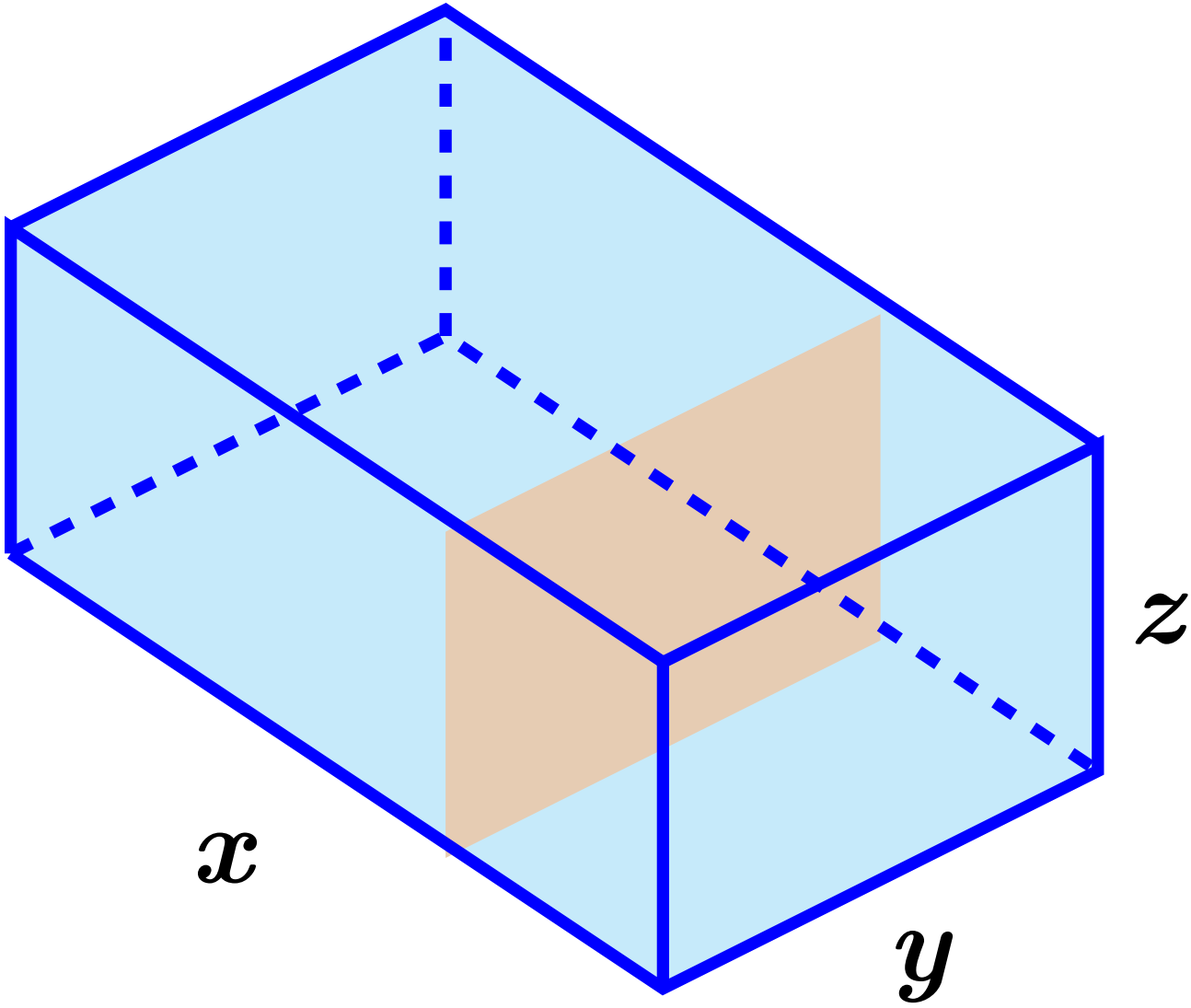

y
0
x

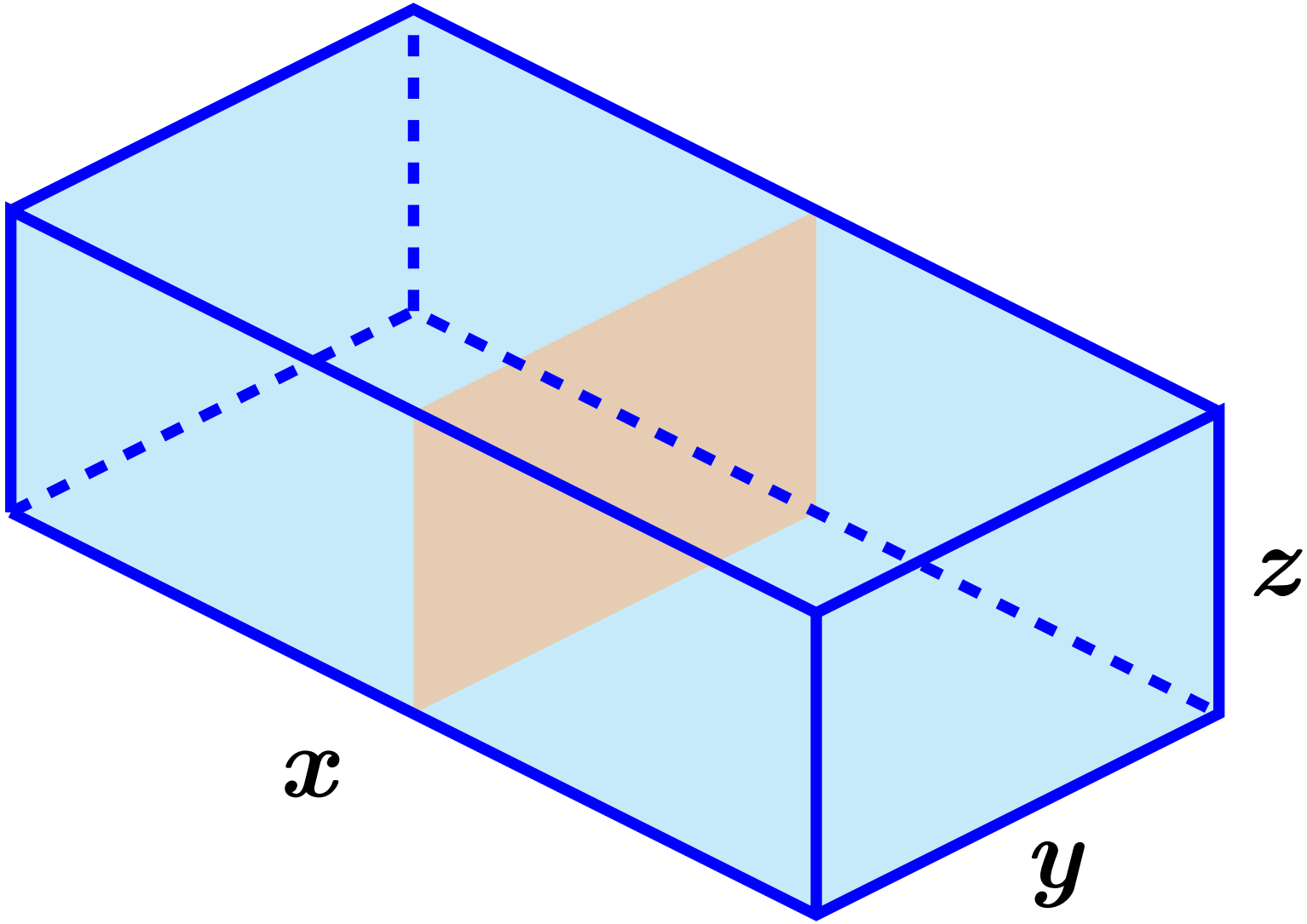

z
x
y

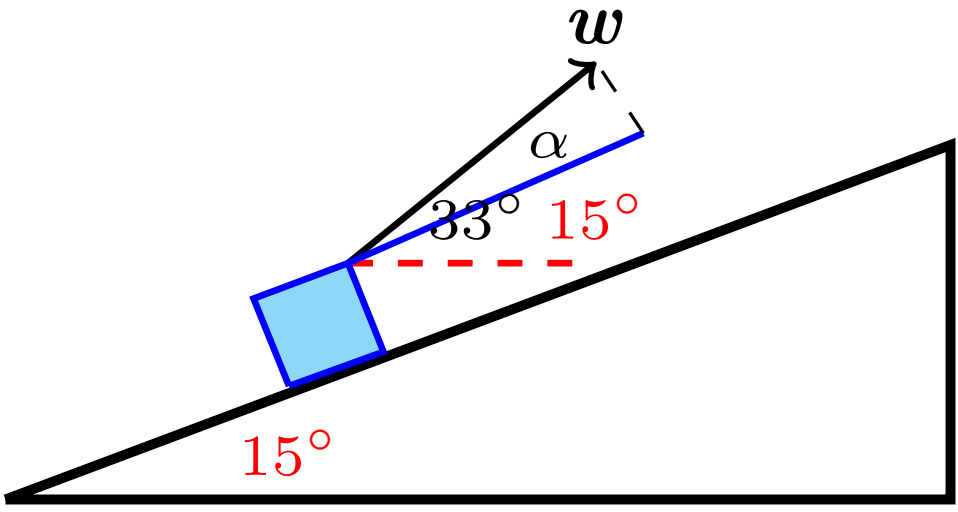

2
r
h
4

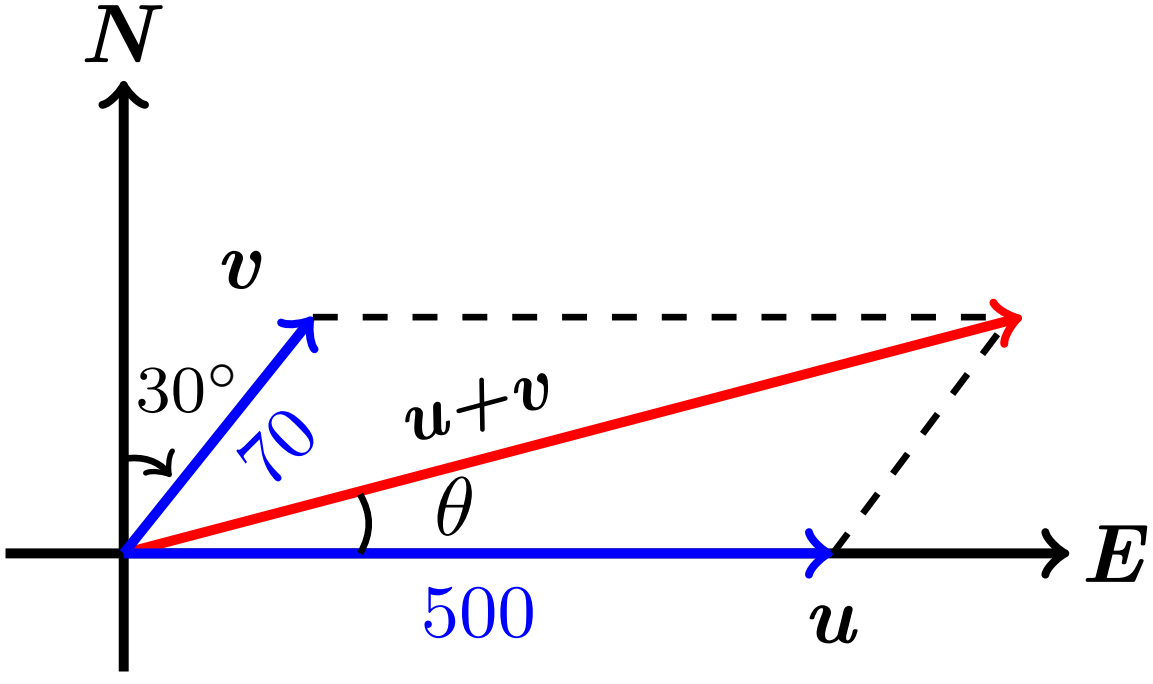

x
y
z

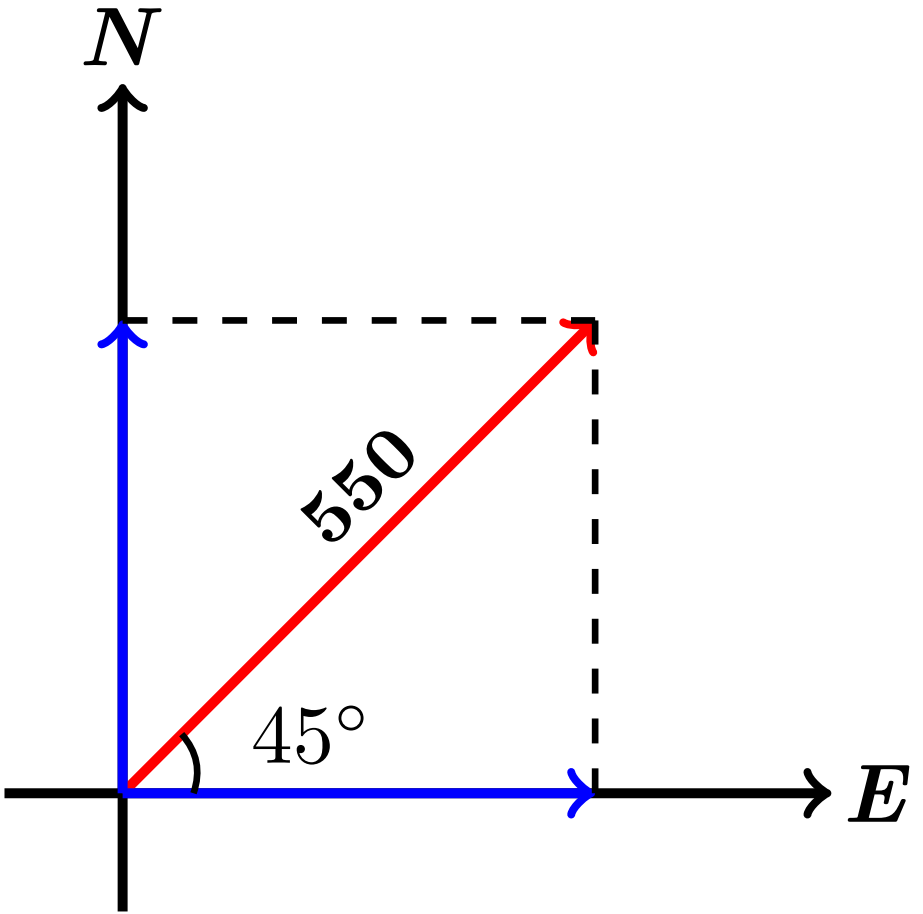

z
x
y

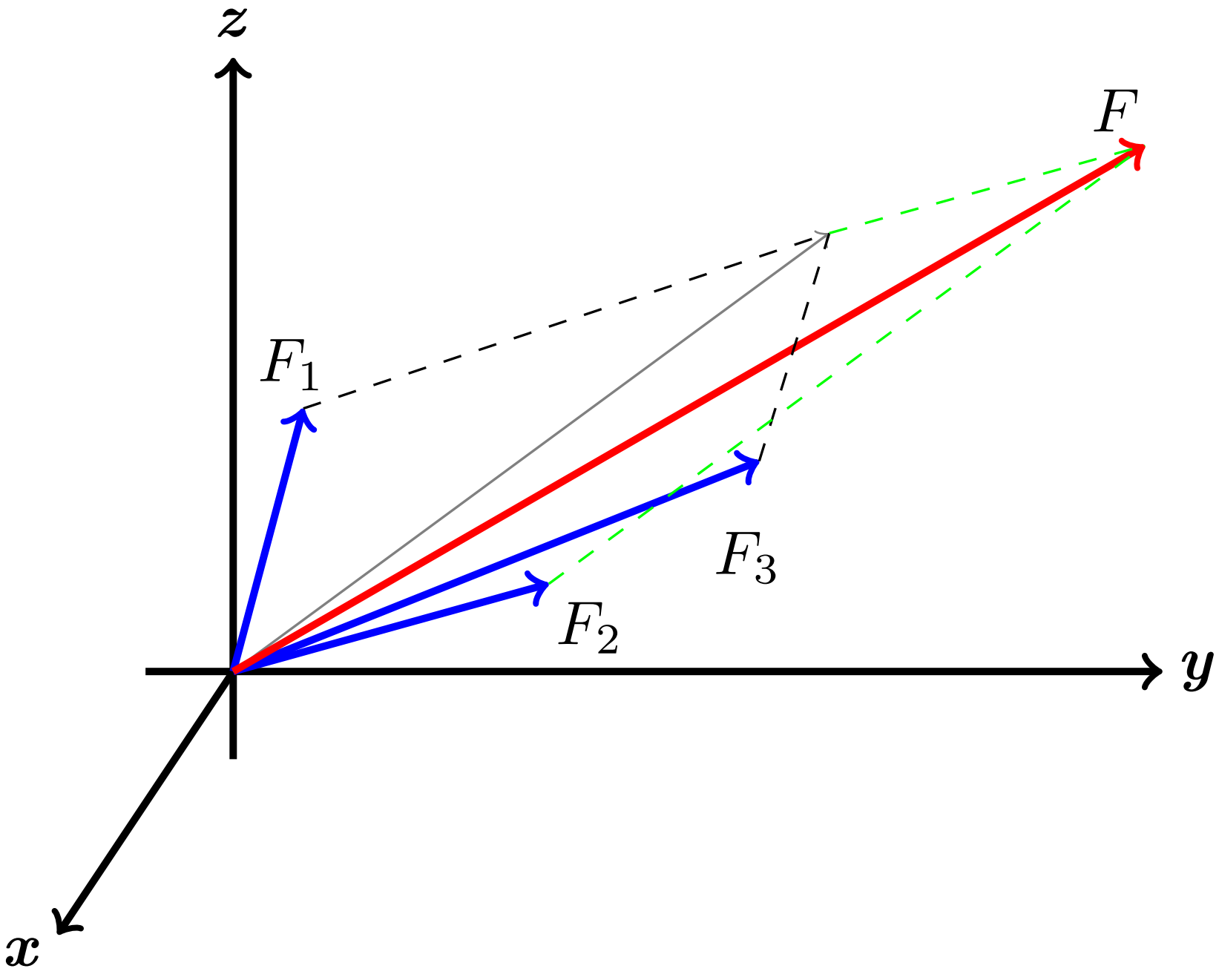

x
y
z

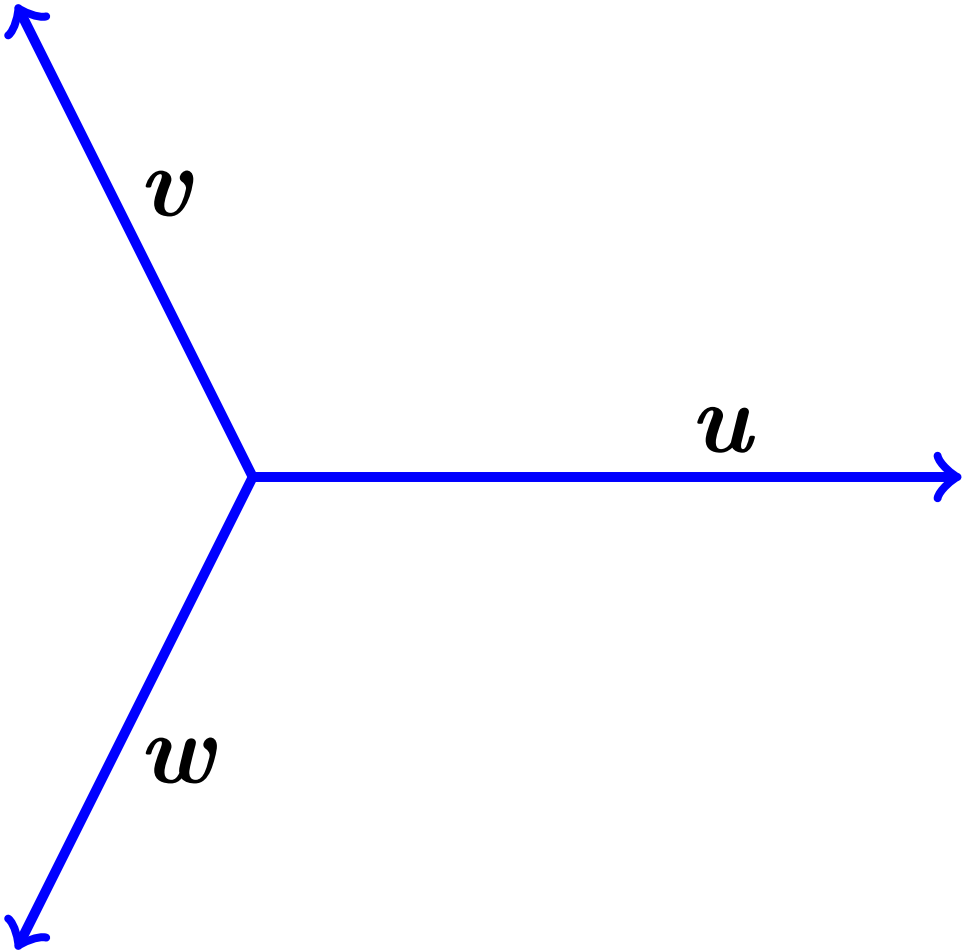

x
y
z

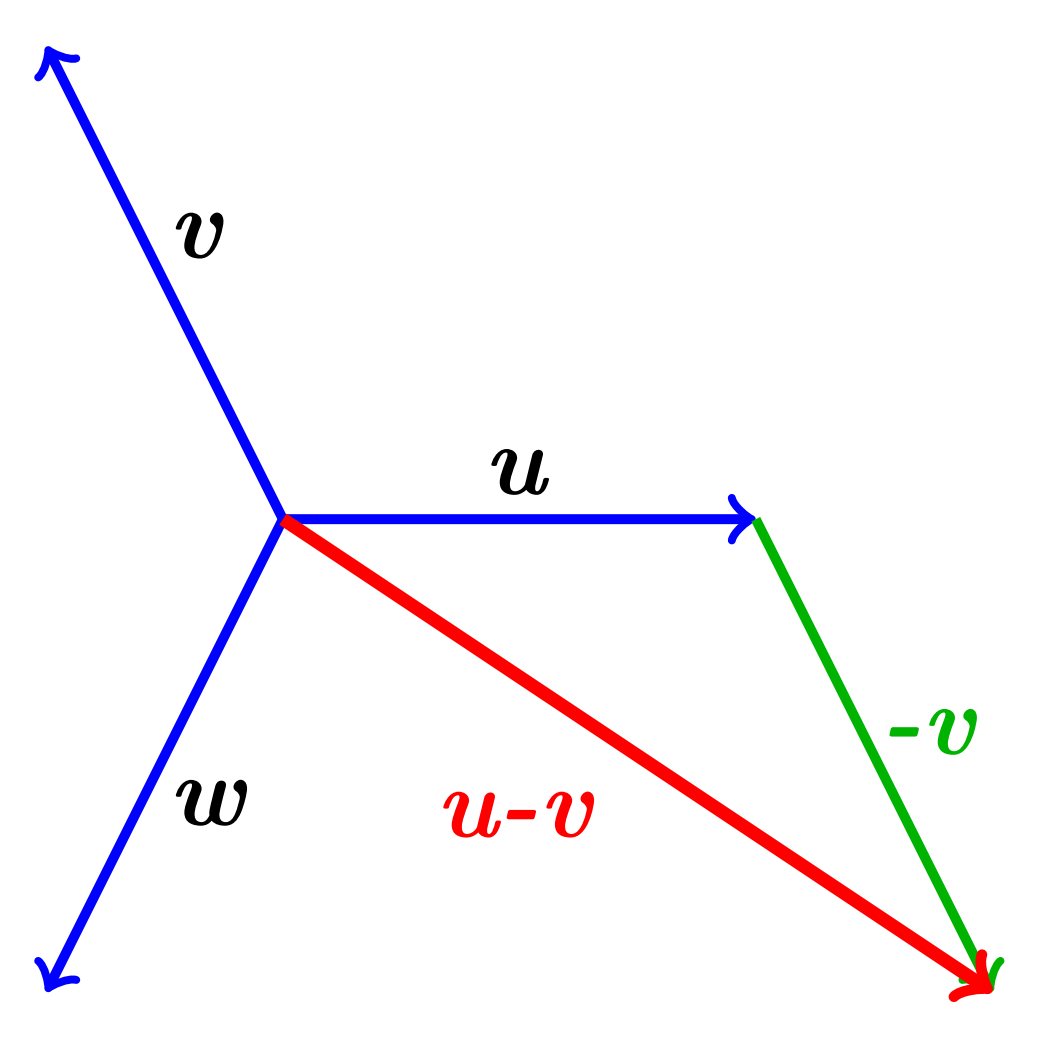

w
α
33°
15°
15°

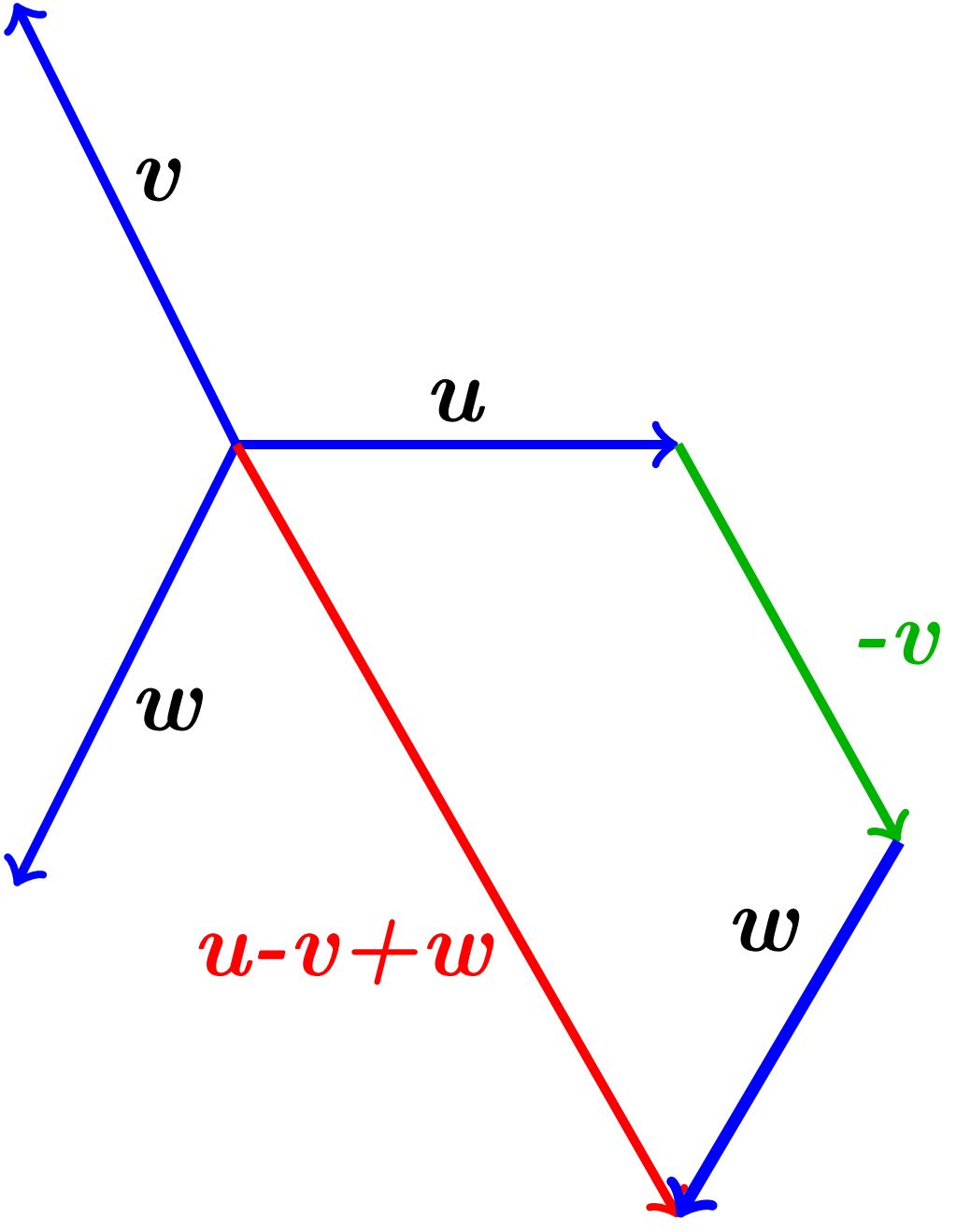

N
v
30°
70
u+v
θ
E
500
u

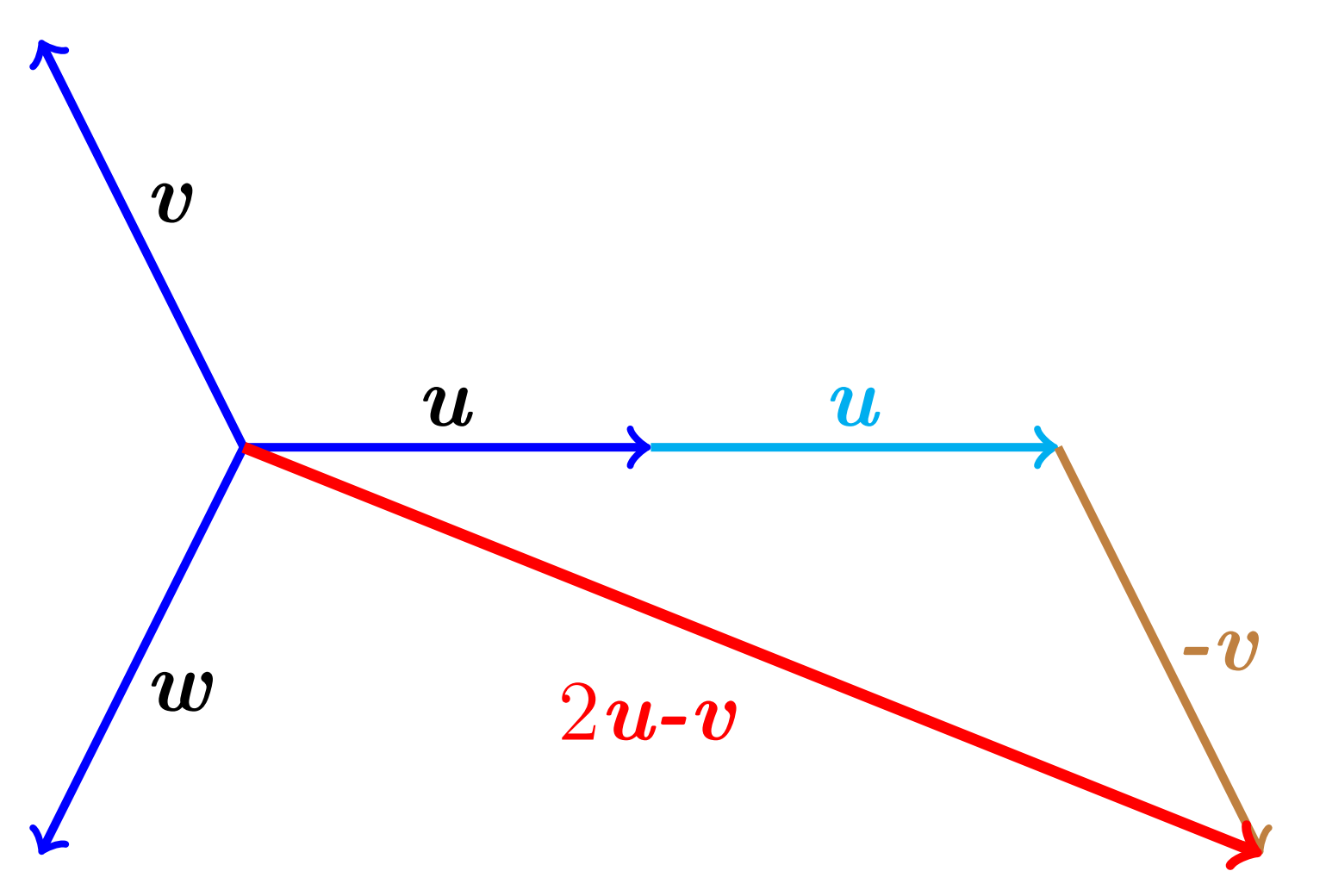

N
550
45°
E

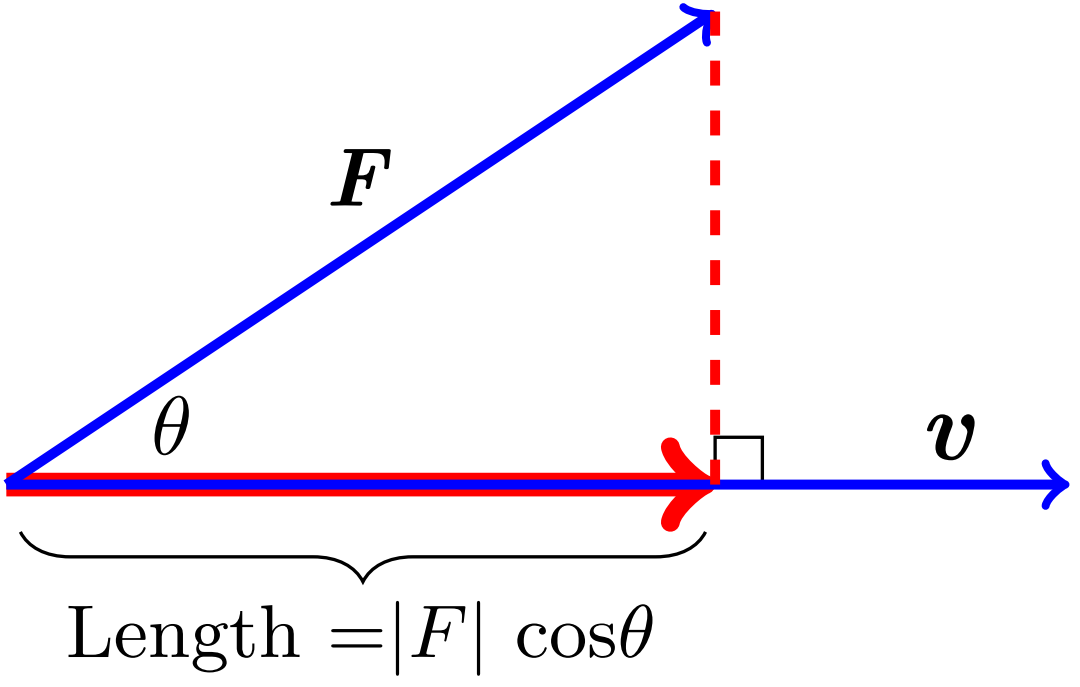

z
F
F1
F3
F2
y
x

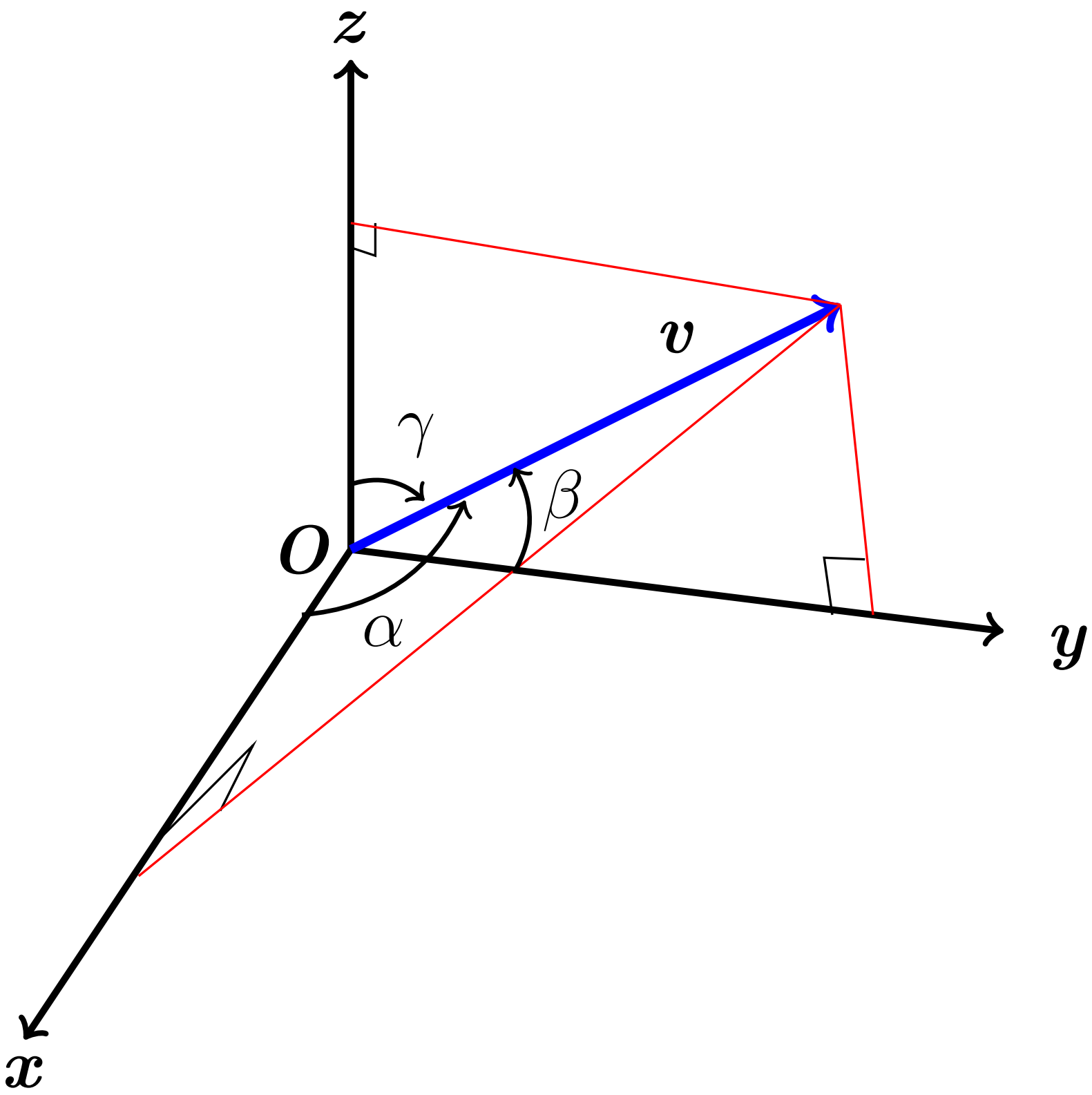

v
u
w

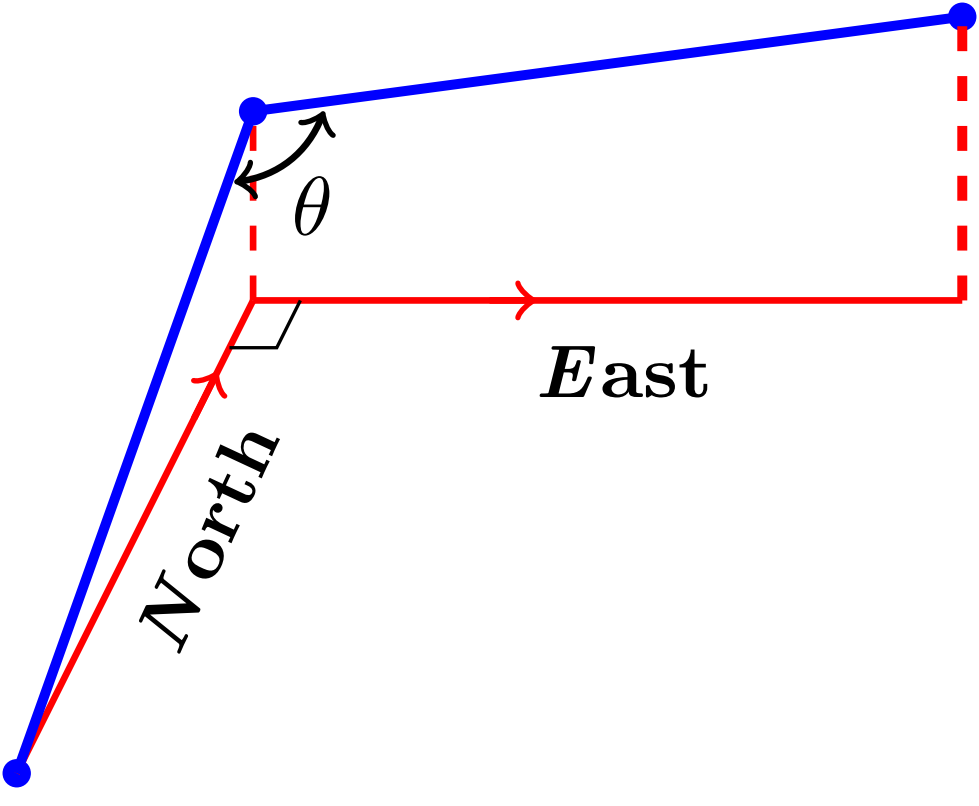

v
u
w
u-v
-v

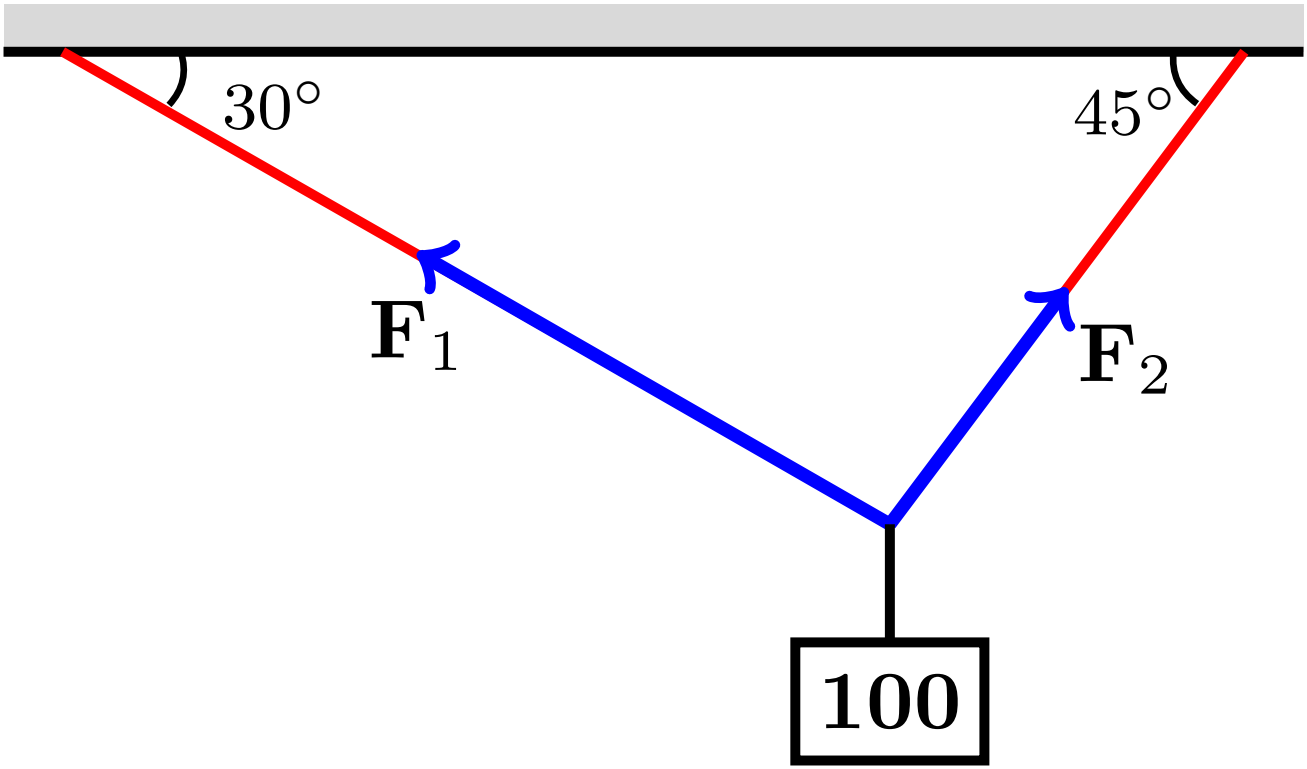

v
u
w
-v
w
u-v+w

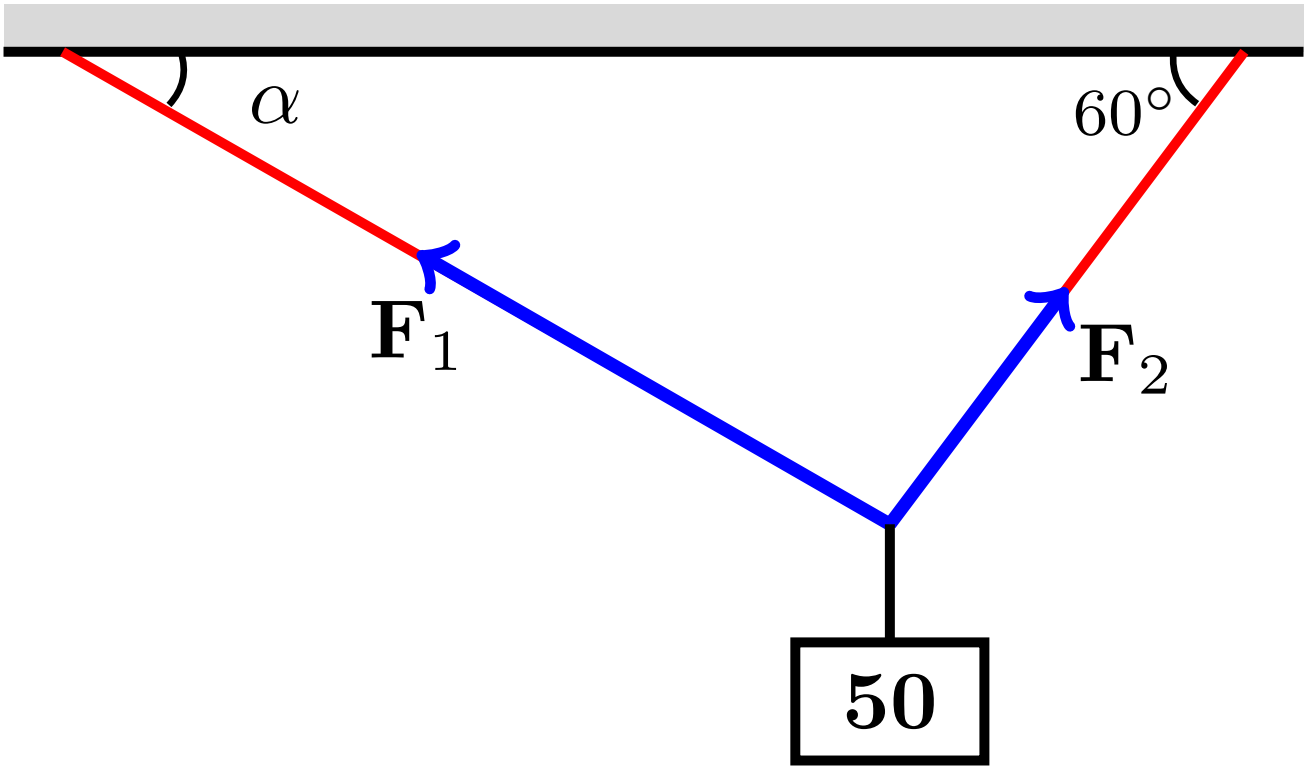

v
u
u
w
2u-v
-v

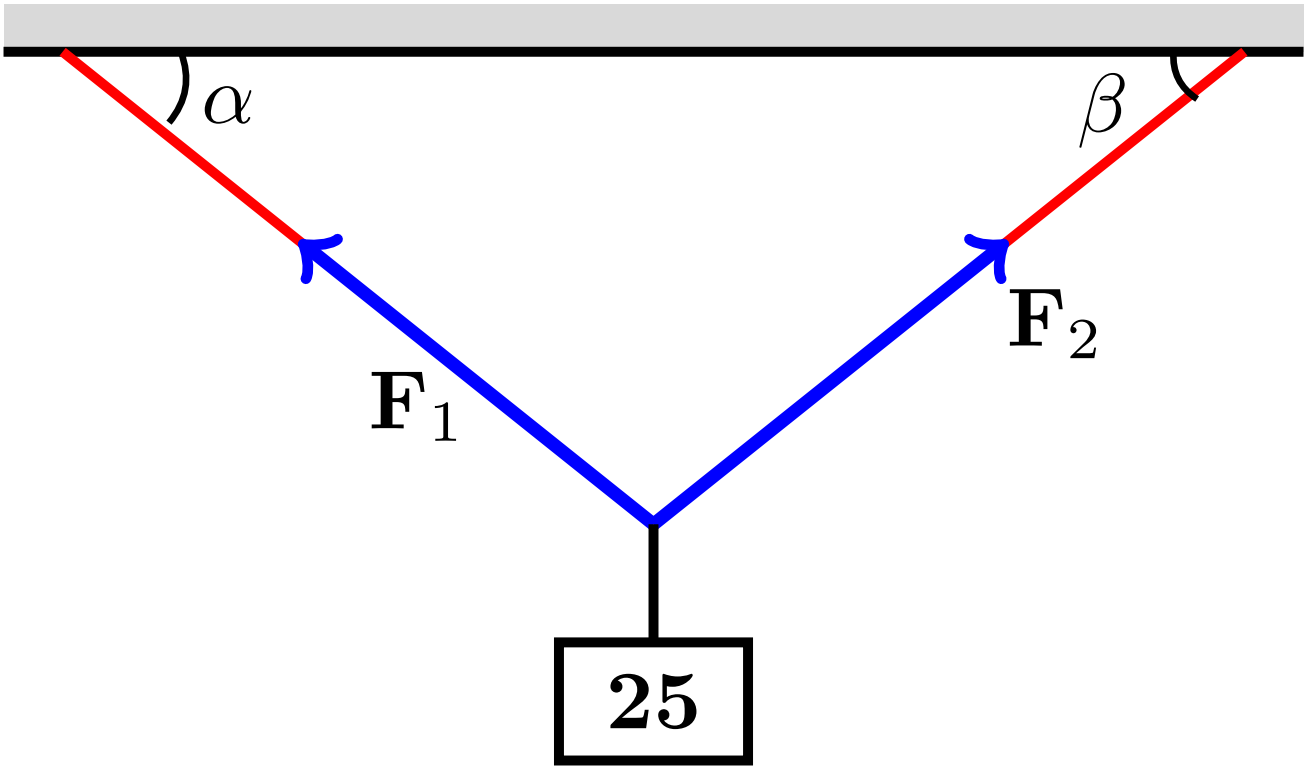

F
θ
v
Length =|F| cosθ

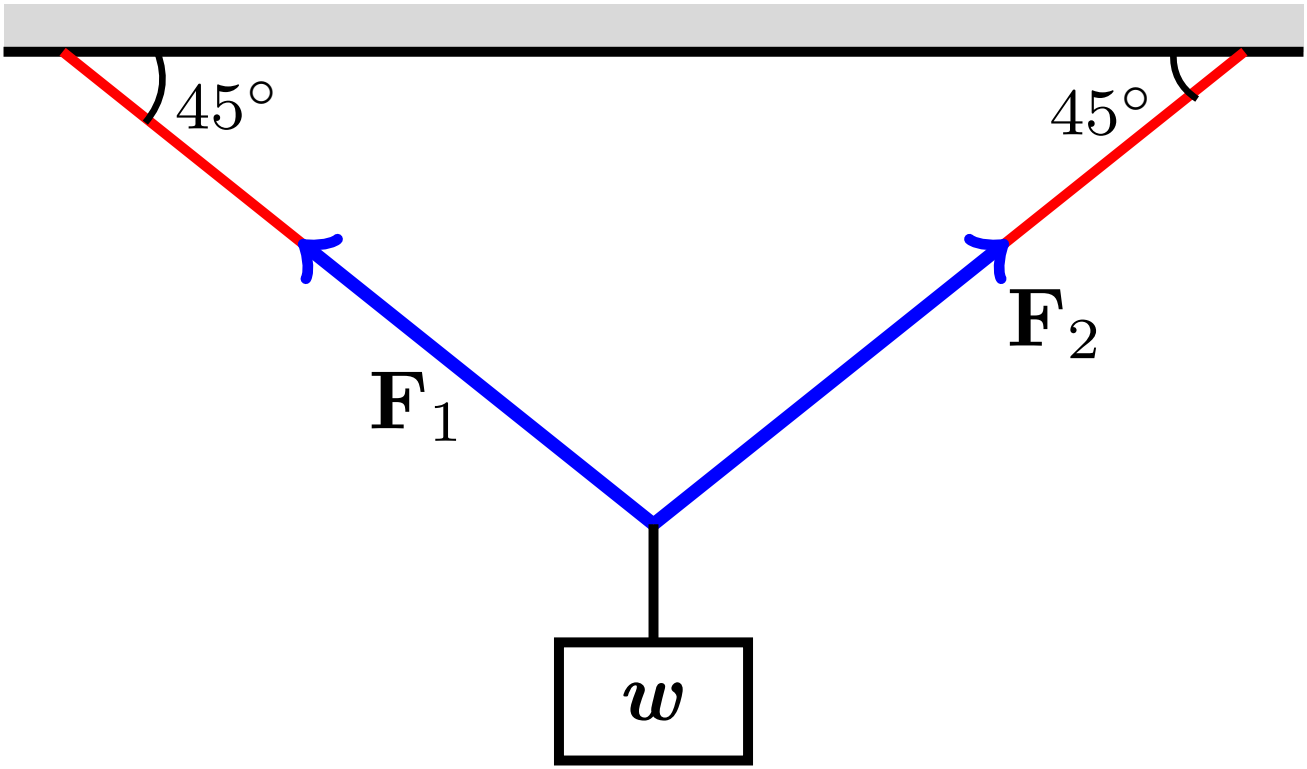

z
v
γ
β
O
α
y
x

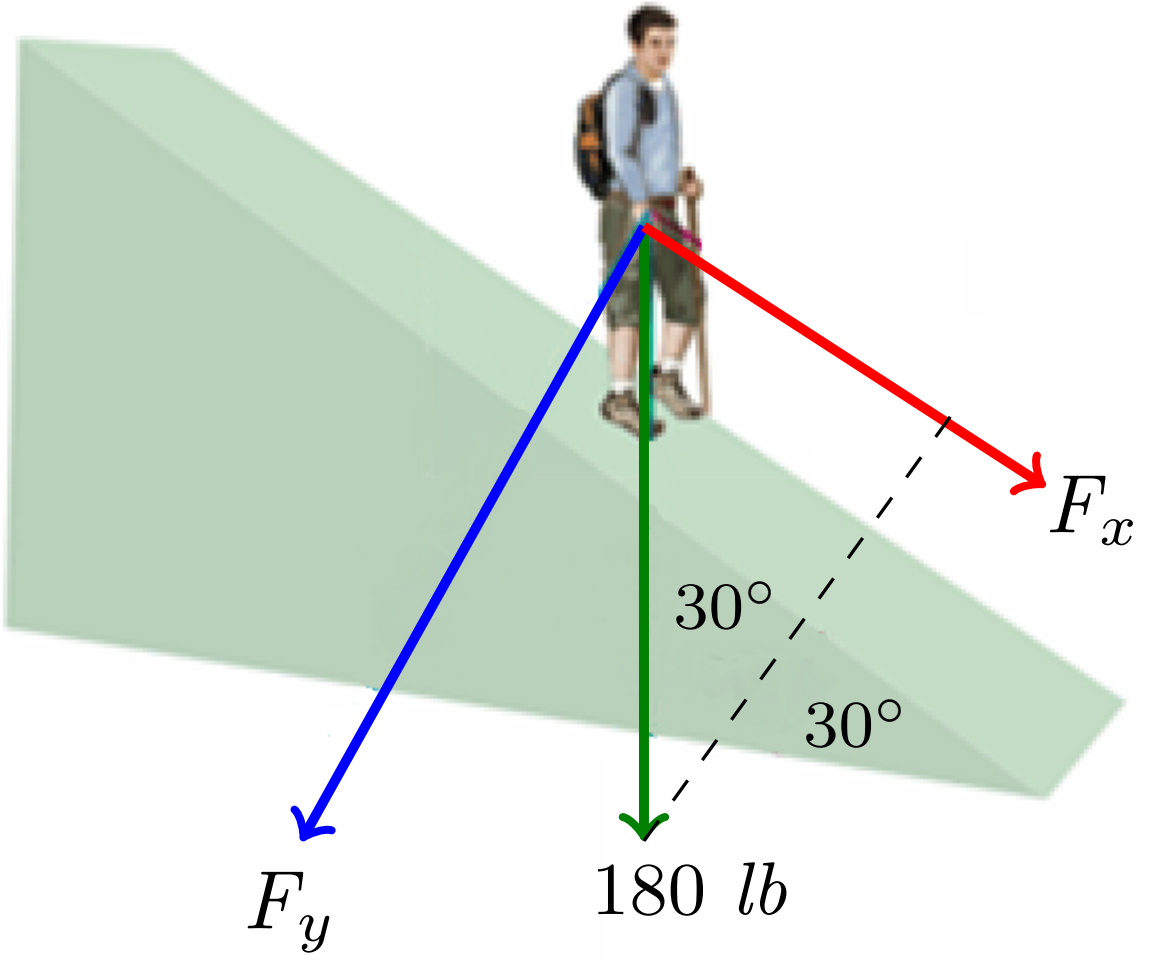

θ
East
North

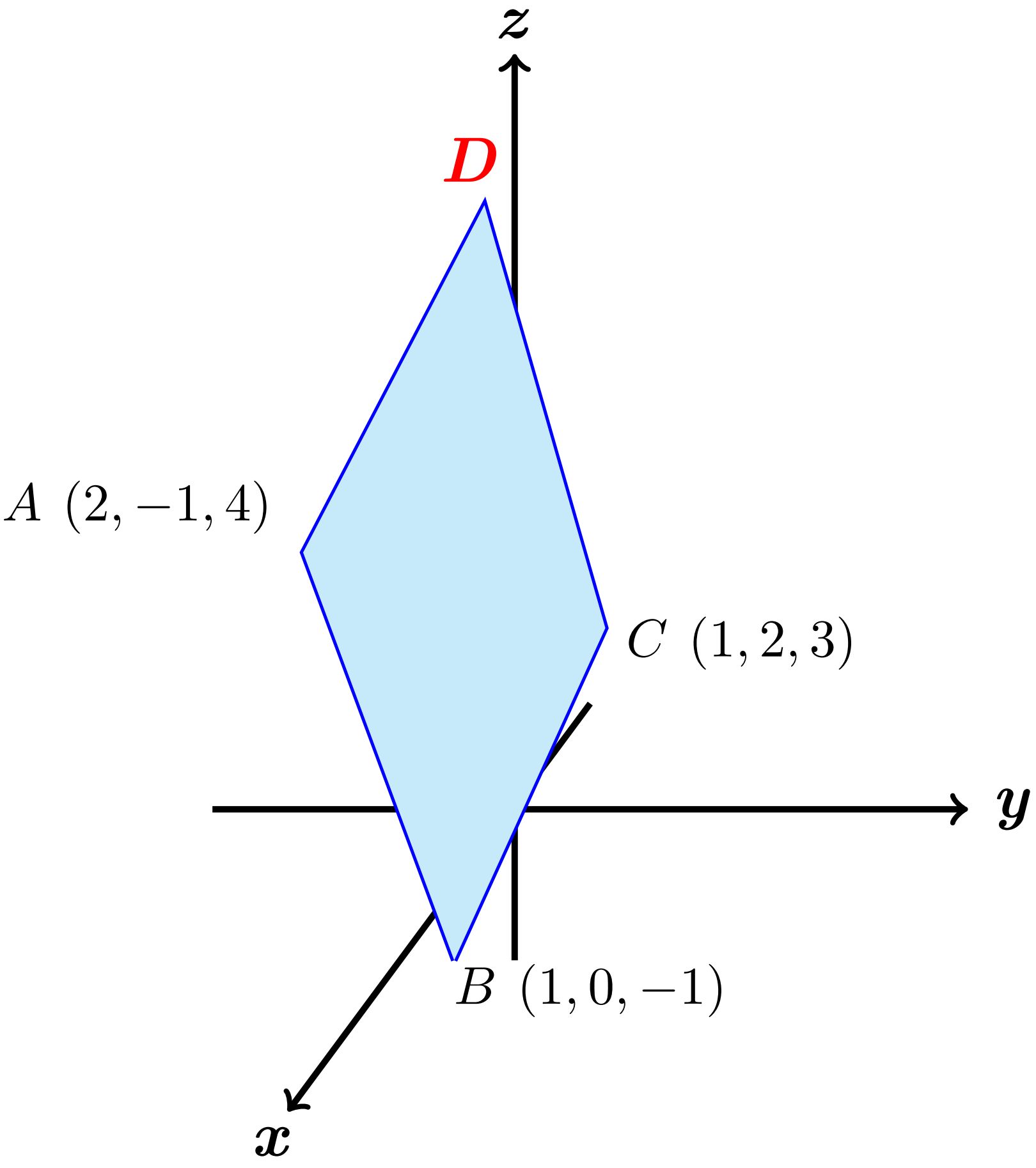

30°
45°
$\mathbf{F}_1$
$\mathbf{F}_2$
100

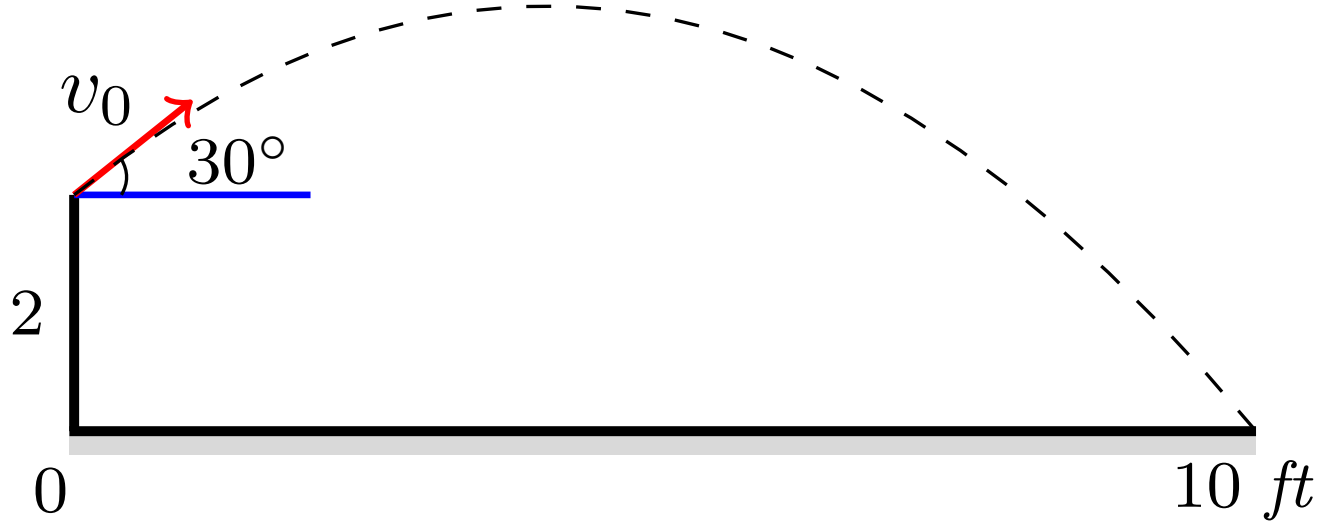

α
60°
F1
F2
50

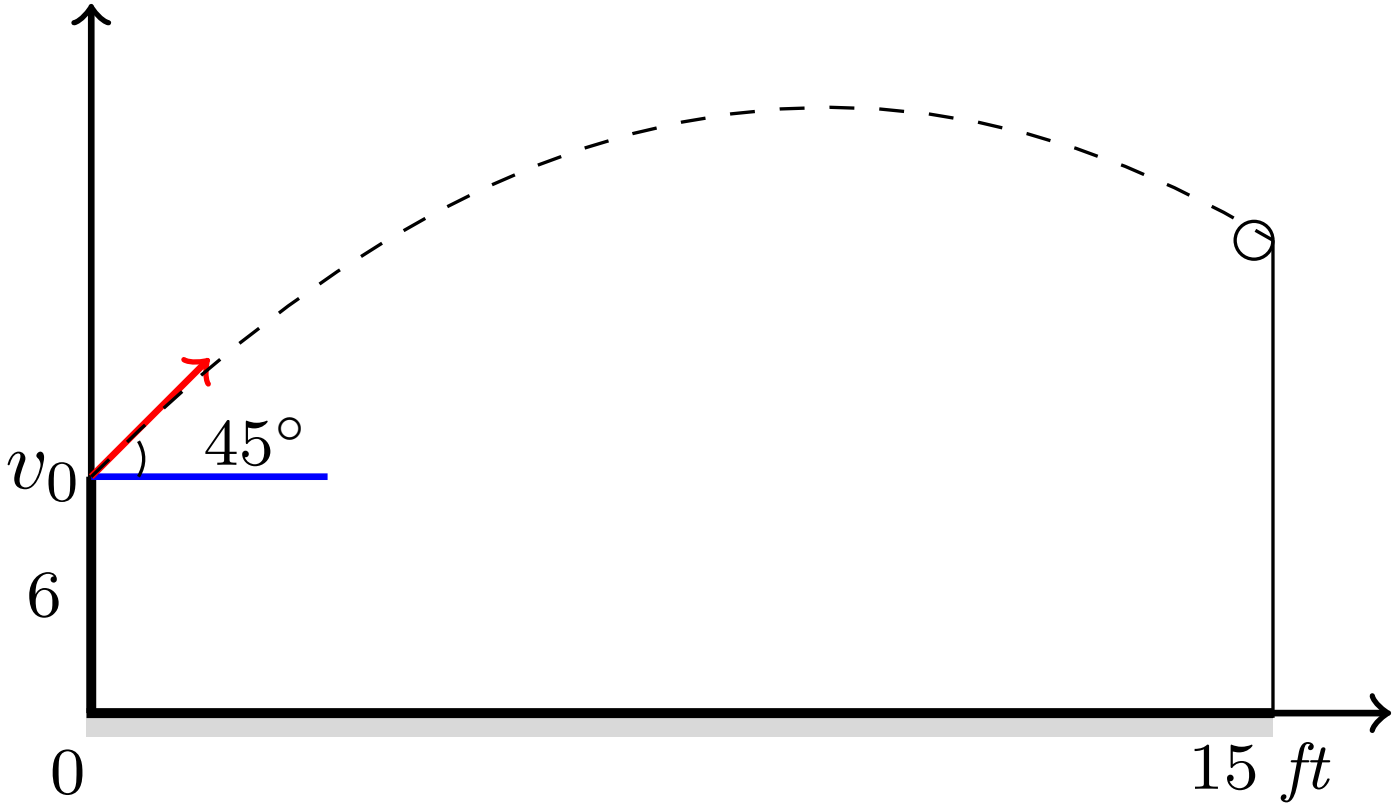

α
β
$\mathbf{F}_1$
$\mathbf{F}_2$
25

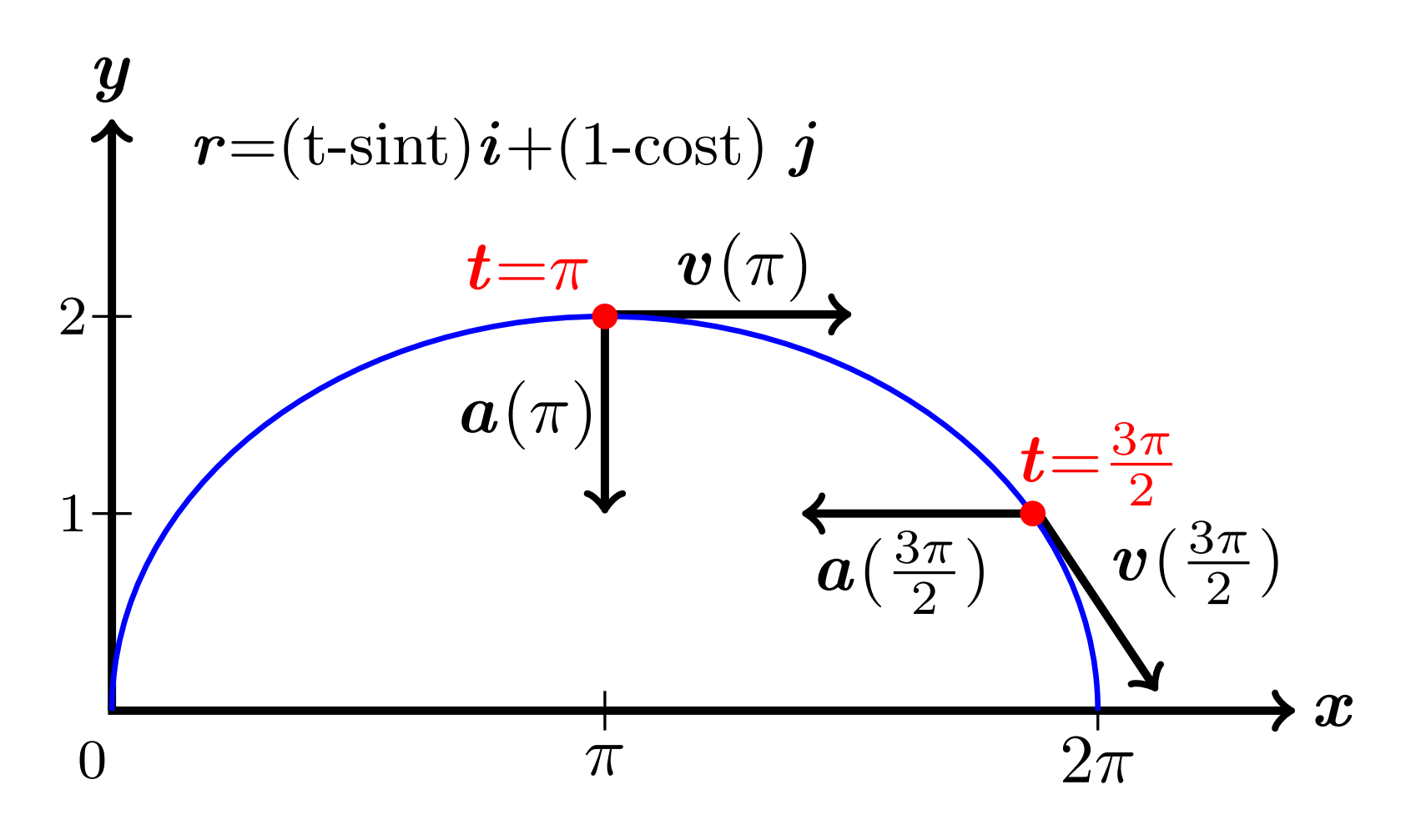

45°
45°
$\mathbf{F}_1$
$\mathbf{F}_2$
w

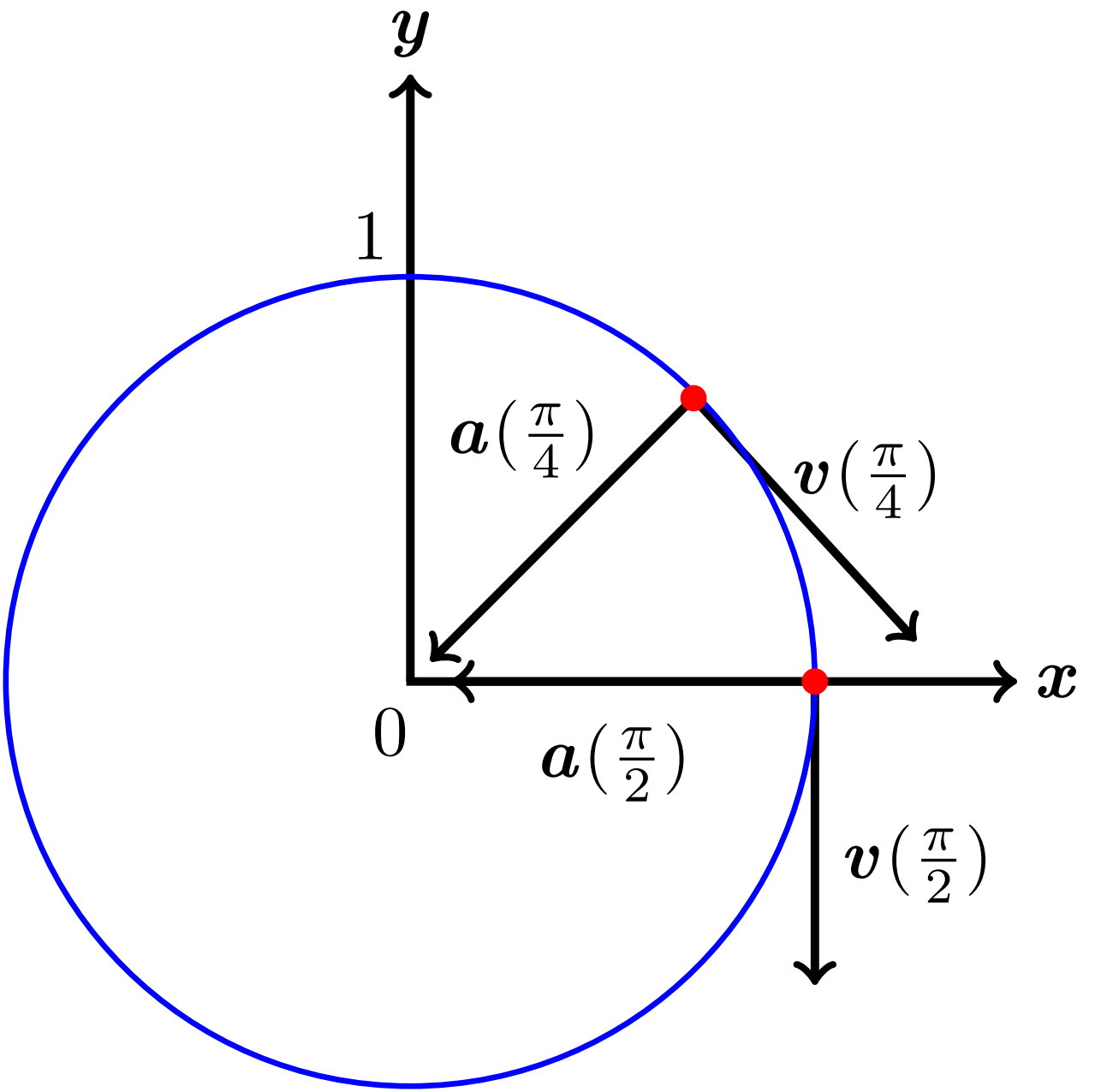

F_x
30°
30°
F_y
180 lb

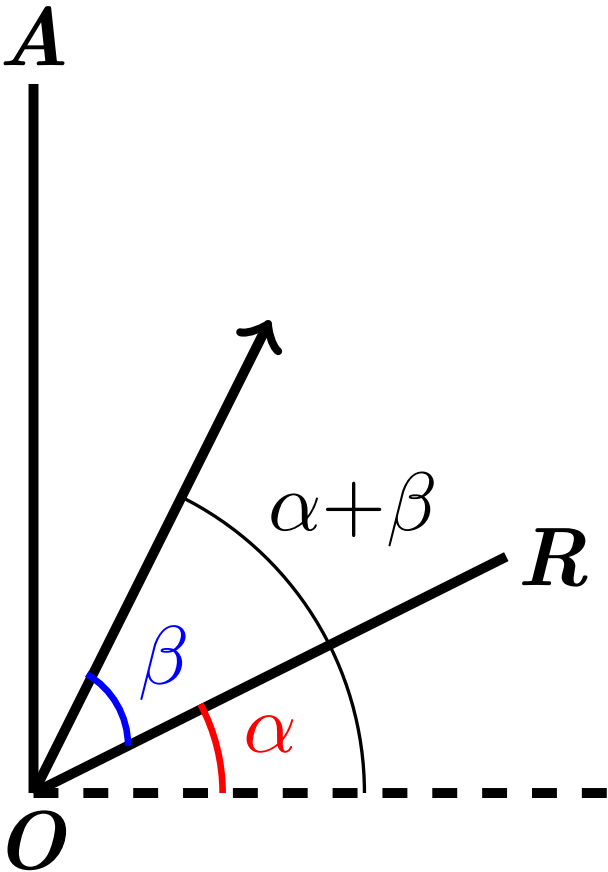

z
D
A (2, −1, 4)
C (1, 2, 3)
y
B (1, 0, −1)
x

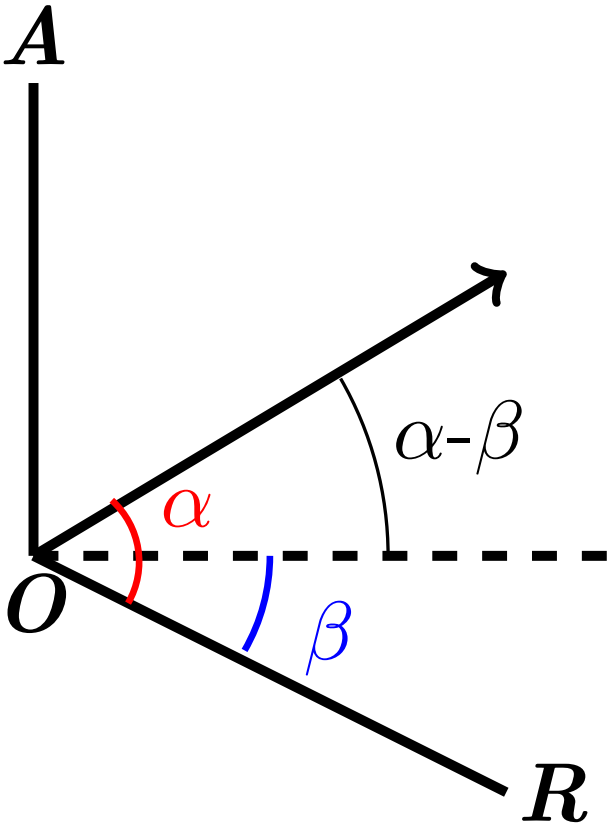

v_0
30°
2
0
10 ft

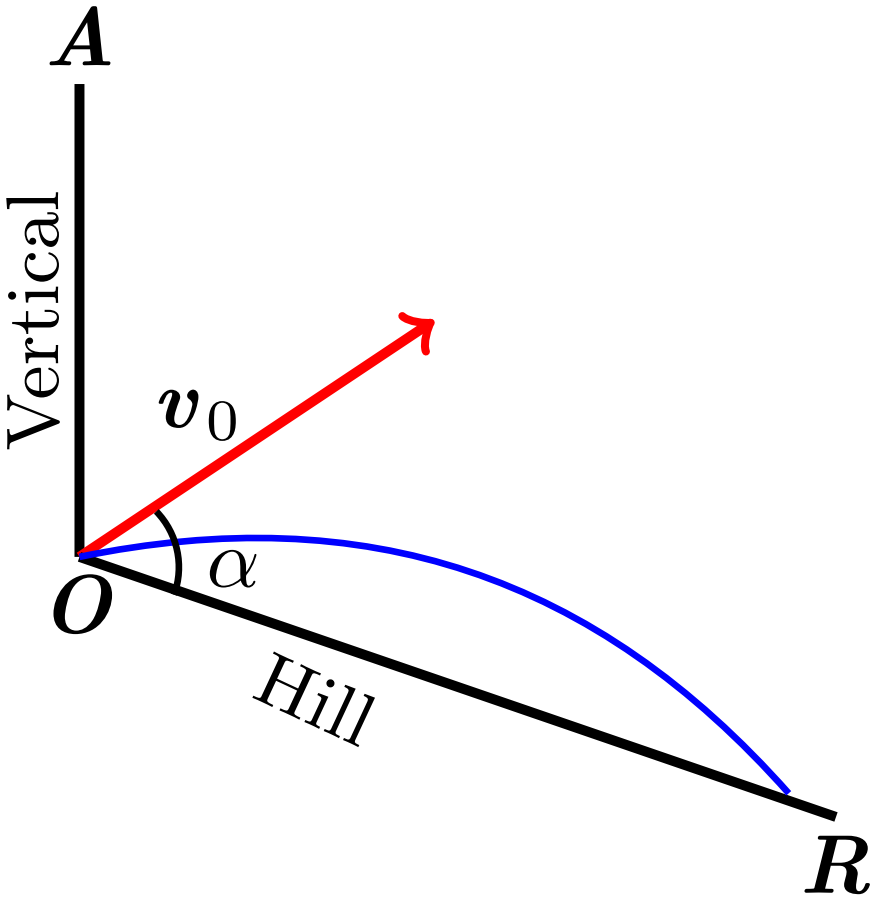

v_0
45°
6
0
15 ft

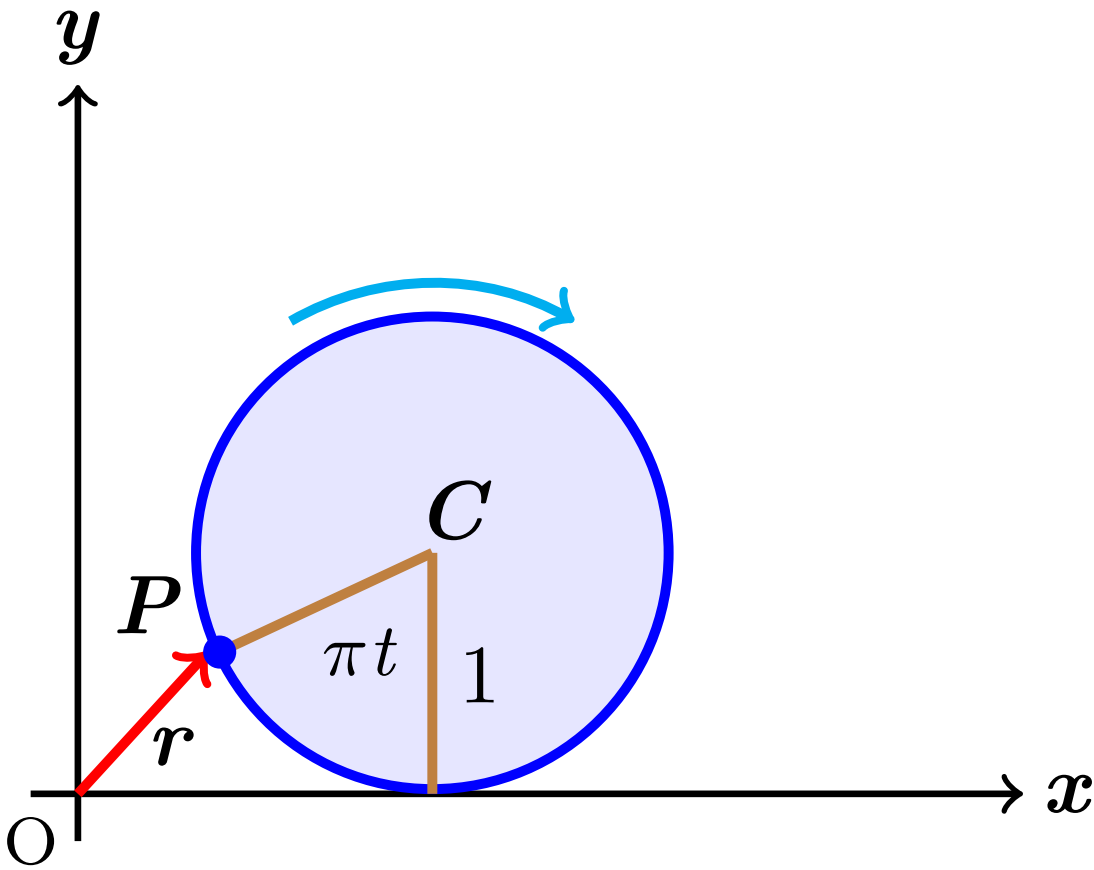

y
r=(t-sint)i+(1-cost) j
t=π
v(π)
a(π)
t=3π/2
a(3π/2)
v(3π/2)
2
1
0
π
2π
x

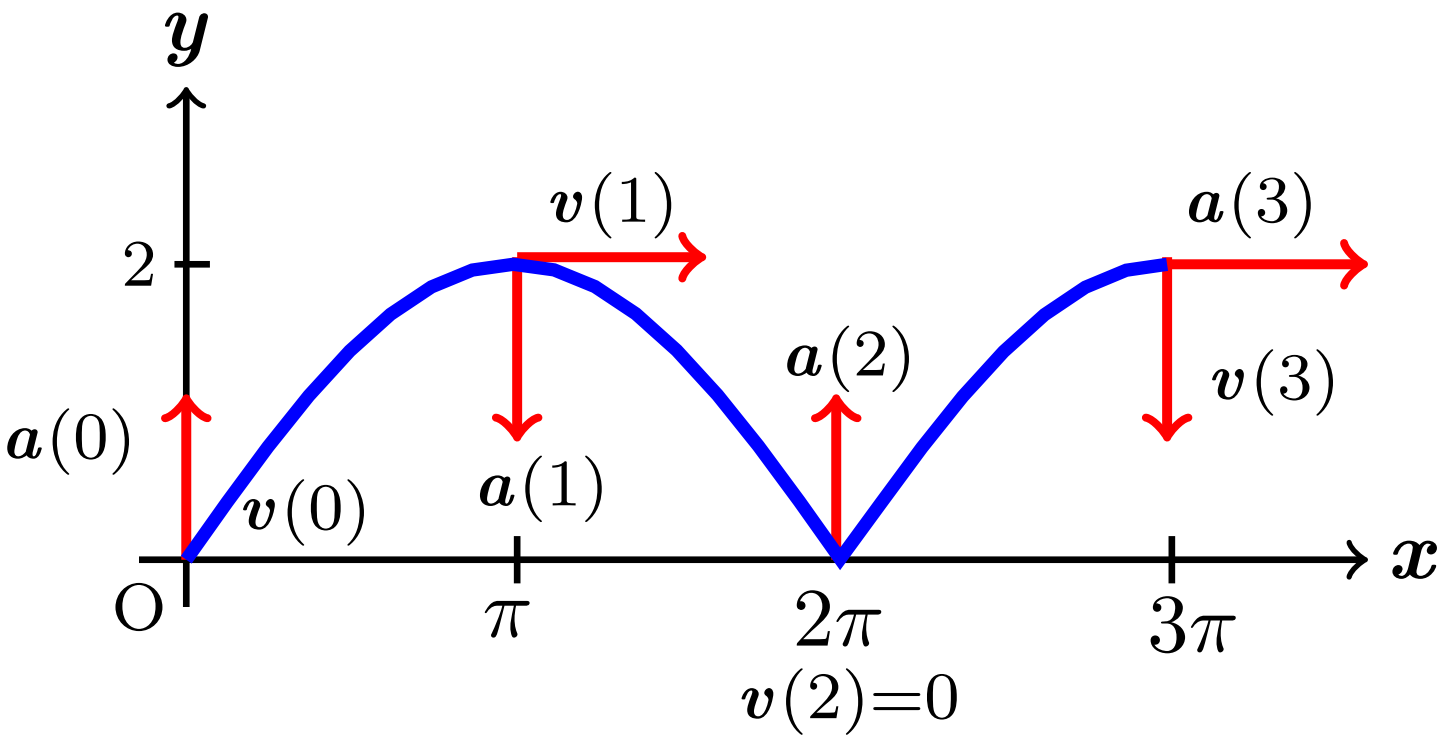

y
1
0
x
$\boldsymbol{a}\left(\frac{\pi}{4}\right)$
$\boldsymbol{v}\left(\frac{\pi}{4}\right)$
$\boldsymbol{a}\left(\frac{\pi}{2}\right)$
$\boldsymbol{v}\left(\frac{\pi}{2}\right)$

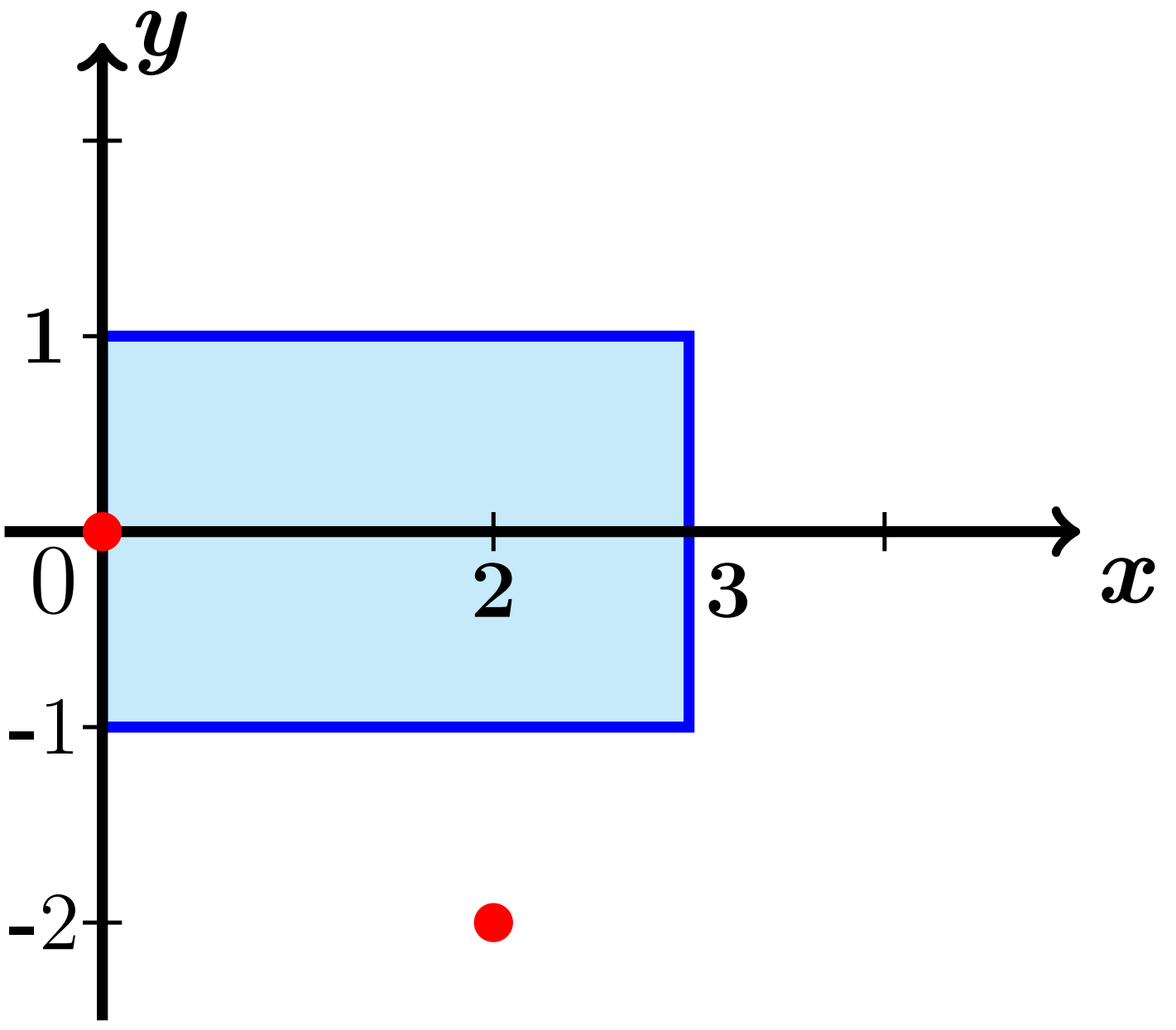

A
α+β
R
β
α
O

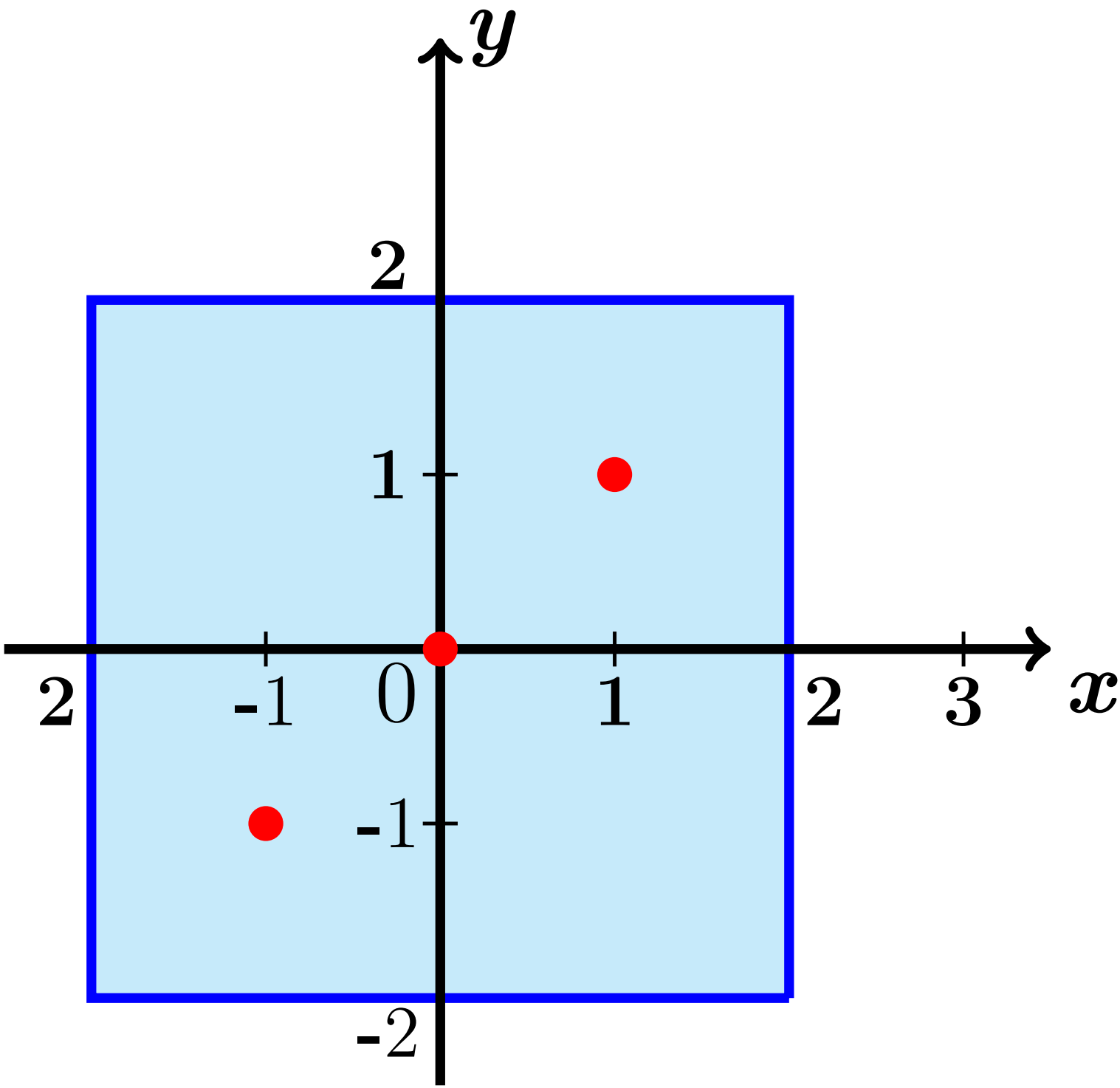

A
α-β
α
O
β
R

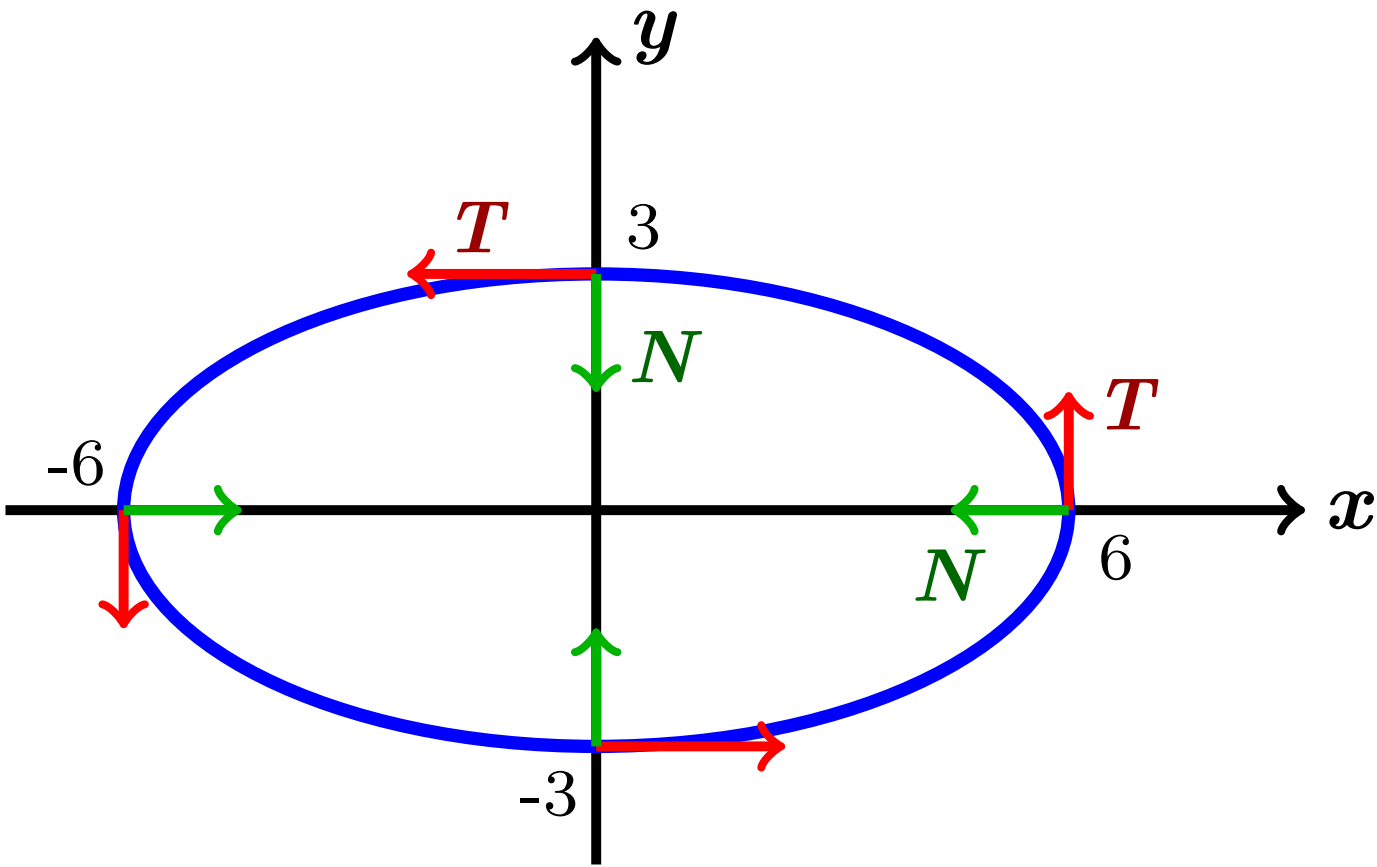

A
Vertical
v_0
α
O
Hill
R

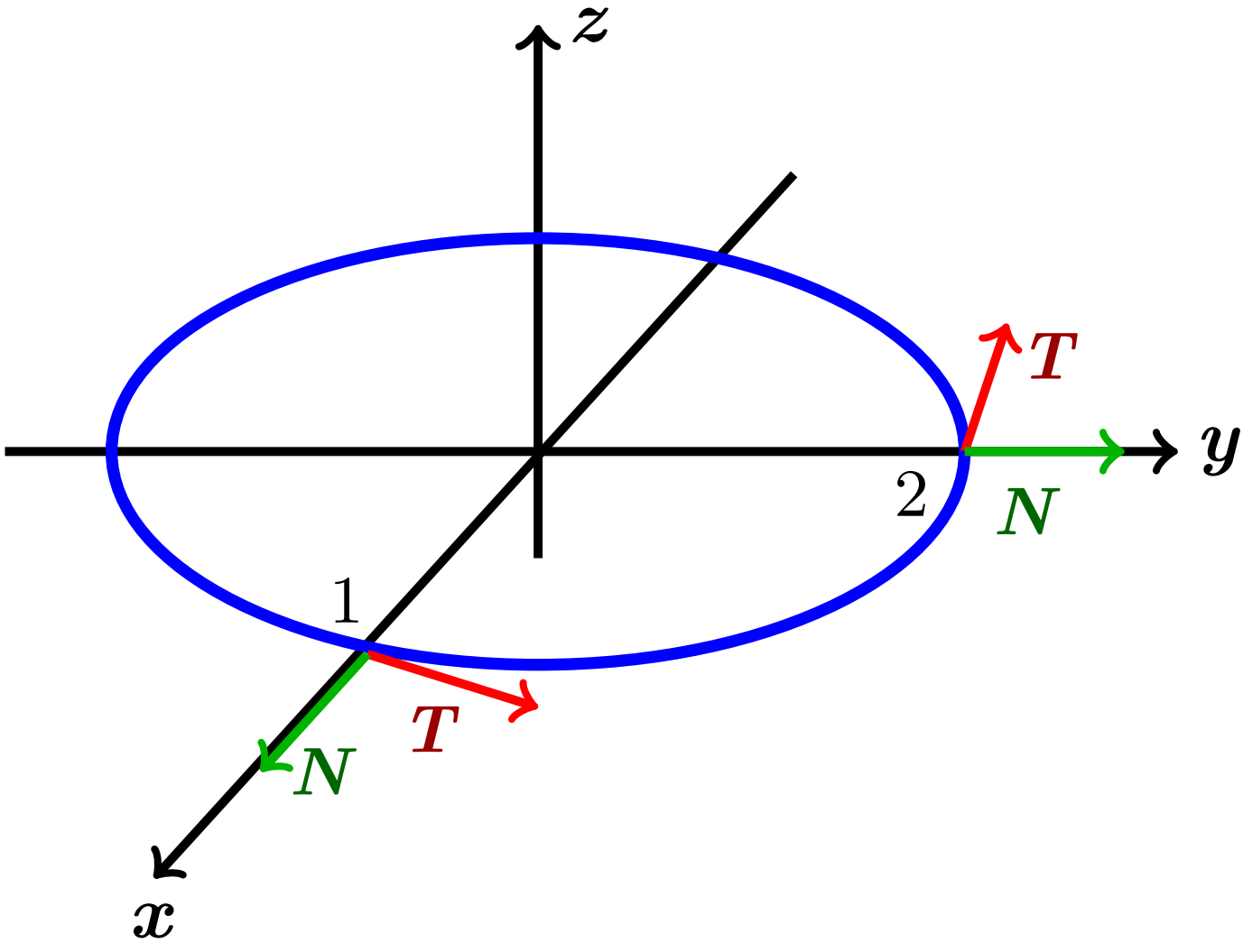

y
C
P
πt
1
r
O
x

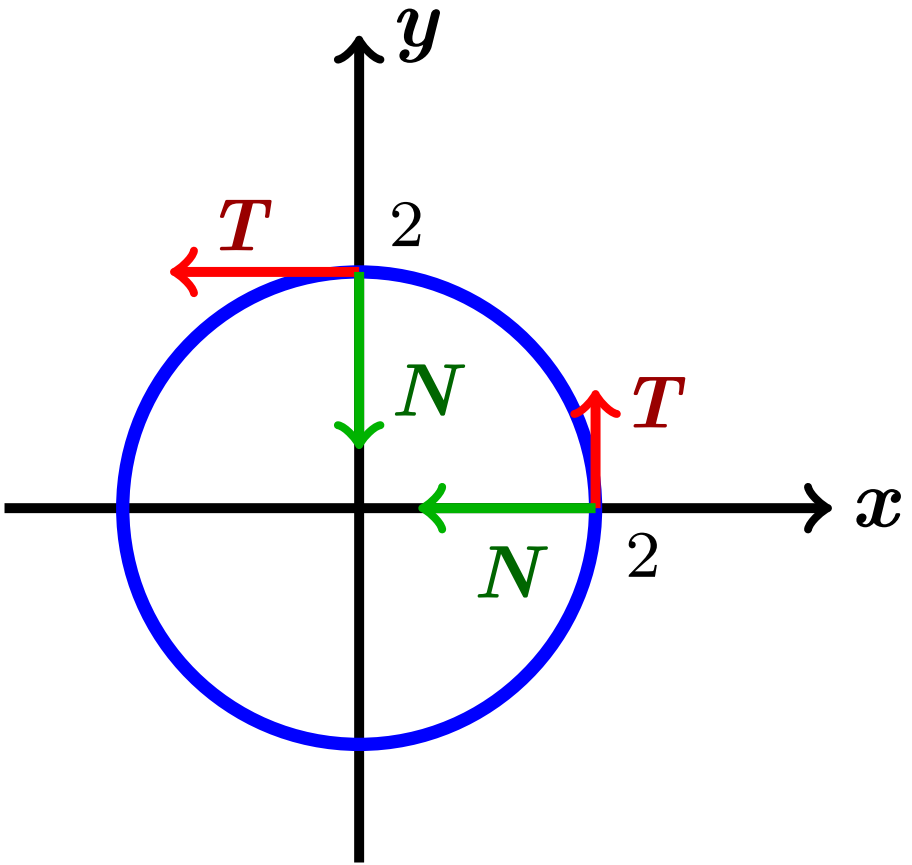

y
2
a(0)
v(1)
a(3)
a(2)
v(3)
v(0)
a(1)
O
x
π
2π
3π
v(2)=0

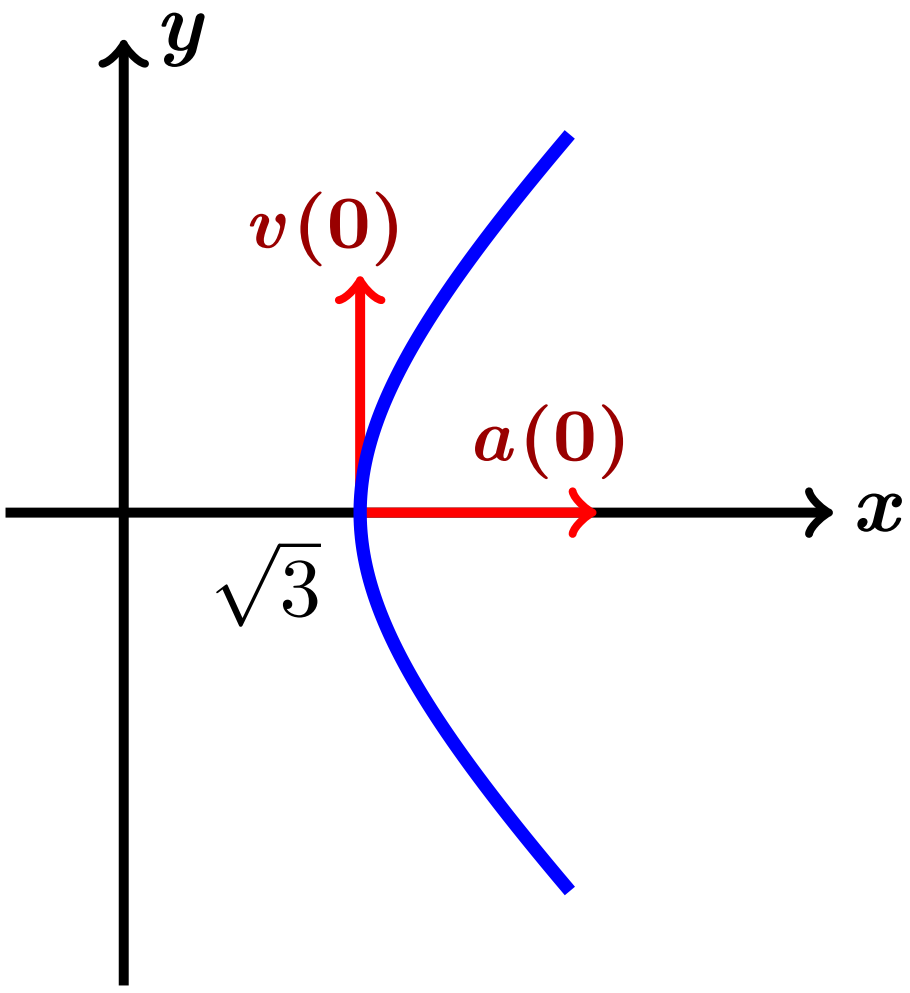

y
1
0
2
3
x
-1
-2

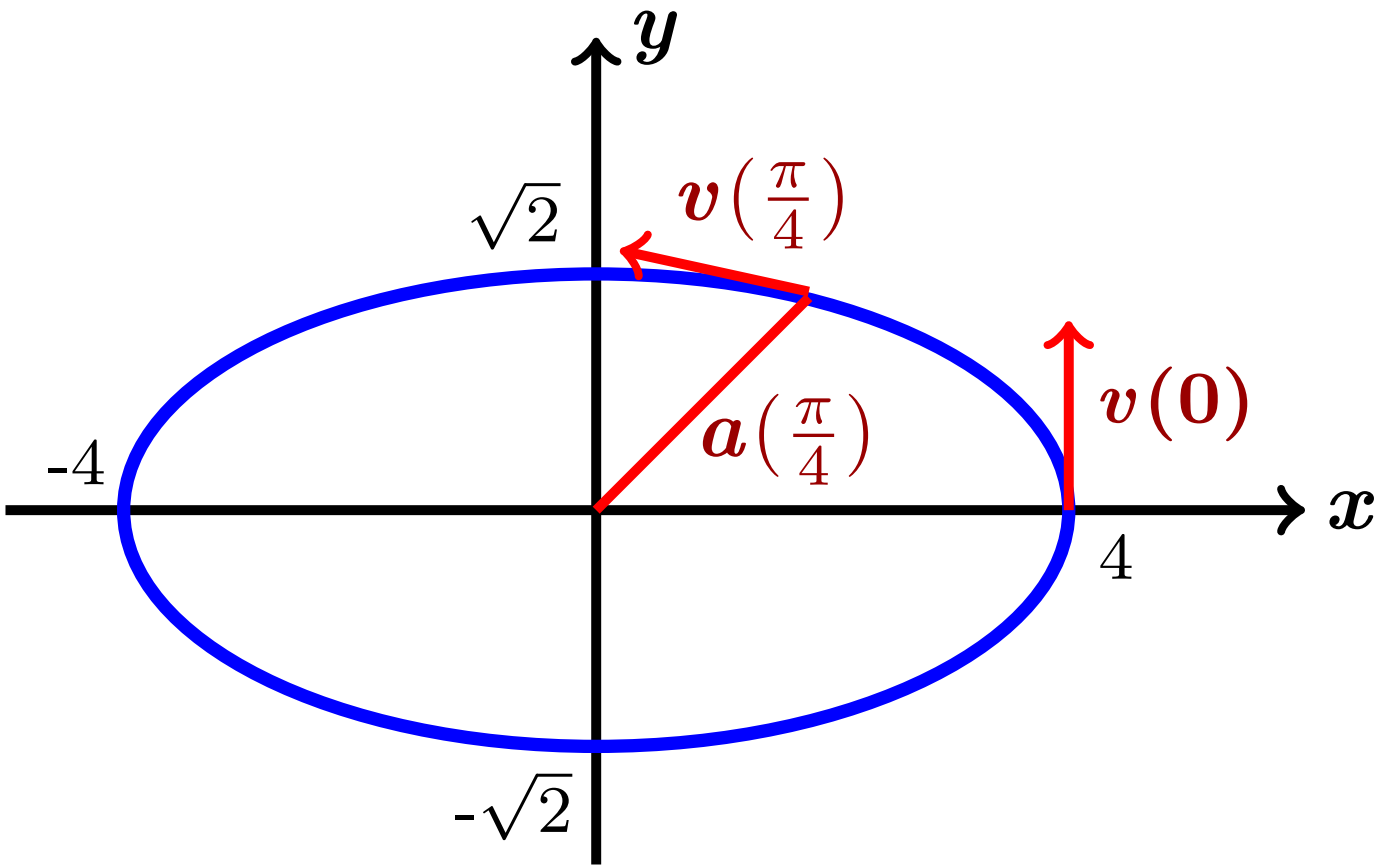

y
2
1
-2
2
-1
0
1
2
3
x

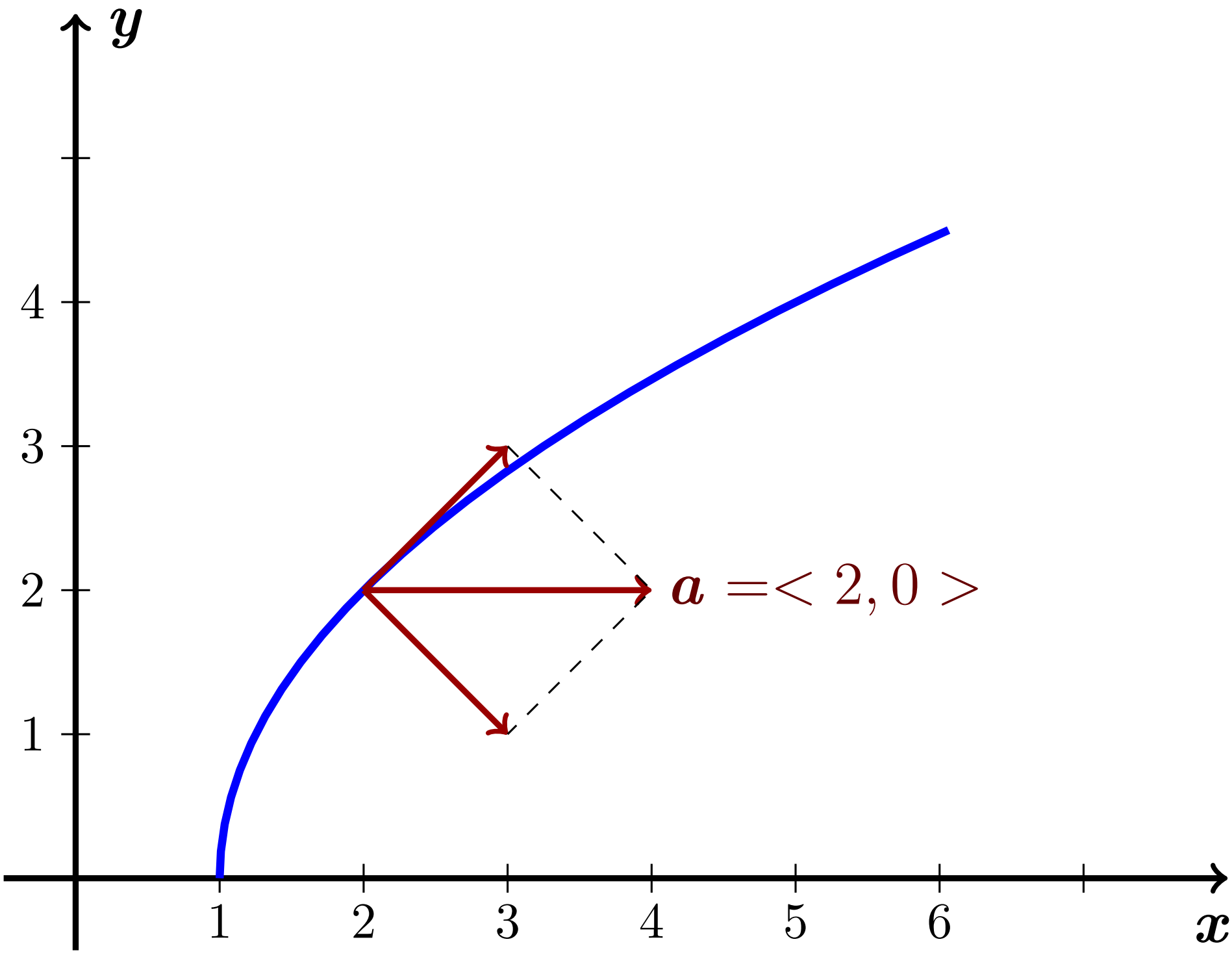

y
x
3
-3
-6
6
T
N
T
N

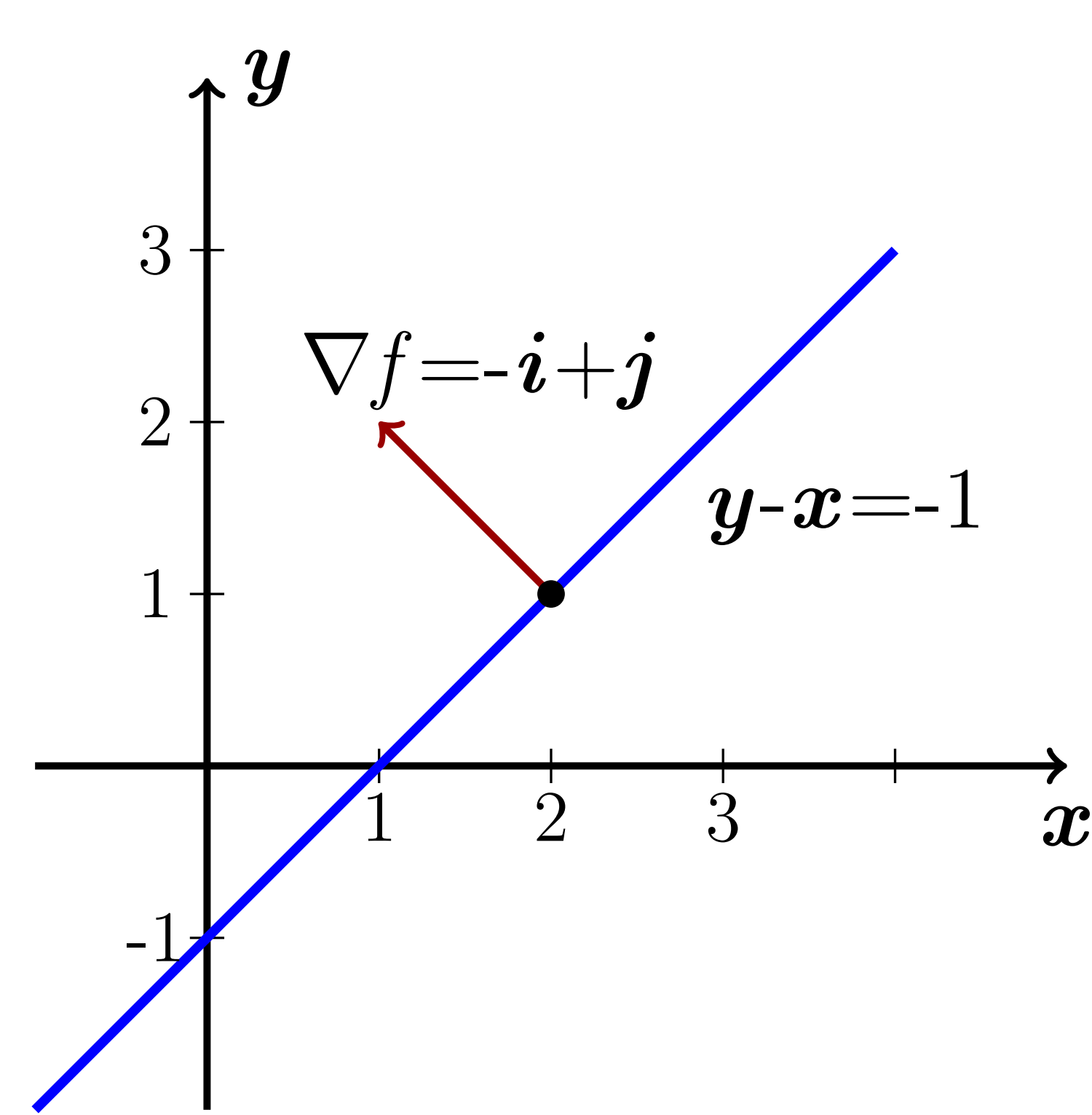

z
y
x
T
N
2
1
T
N

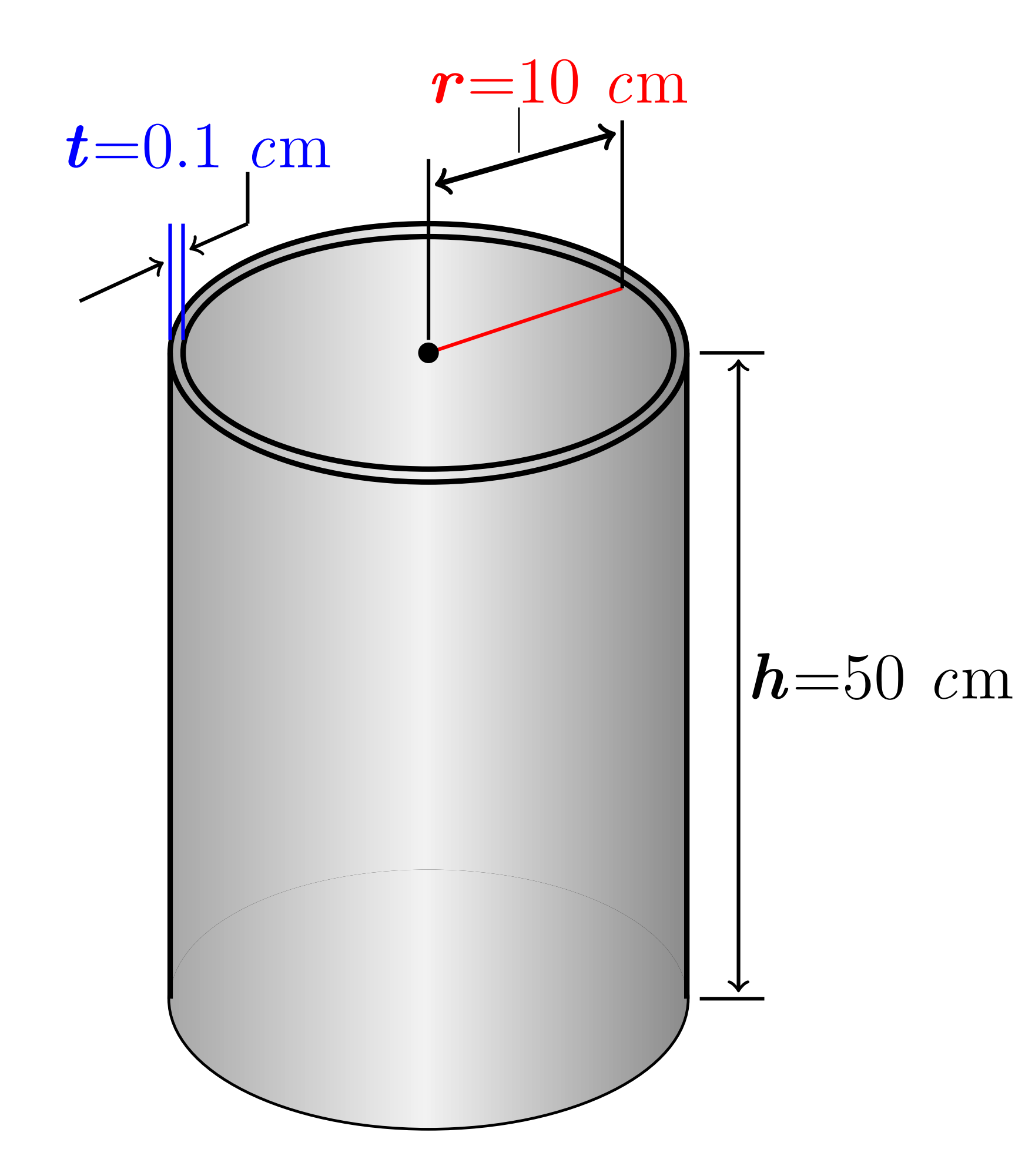

y
T
2
N
T
x
N
2

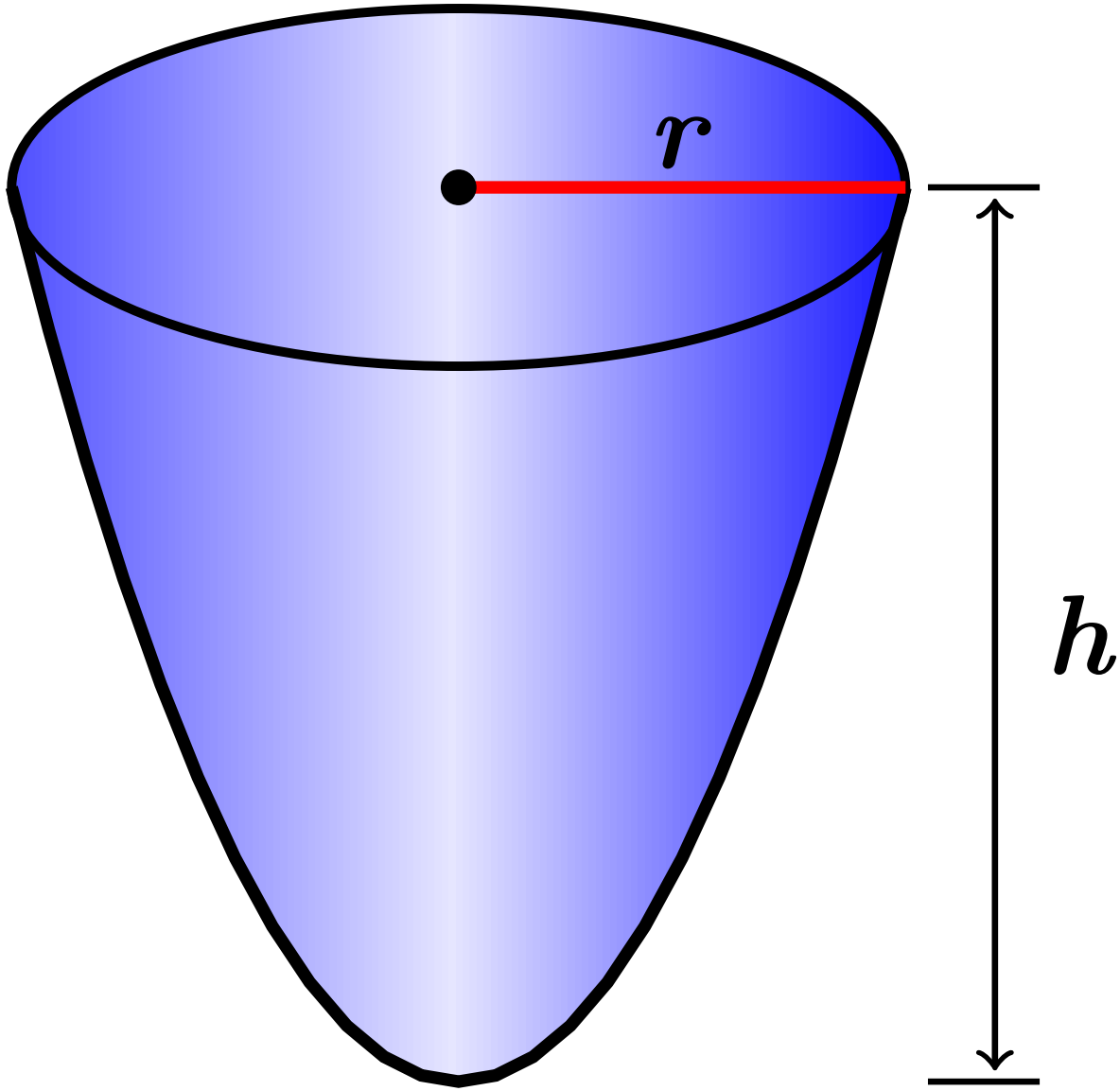

y
v(0)
a(0)
x
√3


y
x
$\sqrt{2}$
$-\sqrt{2}$
-4
4
$\boldsymbol{v}\left(\frac{\pi}{4}\right)$
$\boldsymbol{a}\left(\frac{\pi}{4}\right)$
$\boldsymbol{v}(\mathbf{0})$

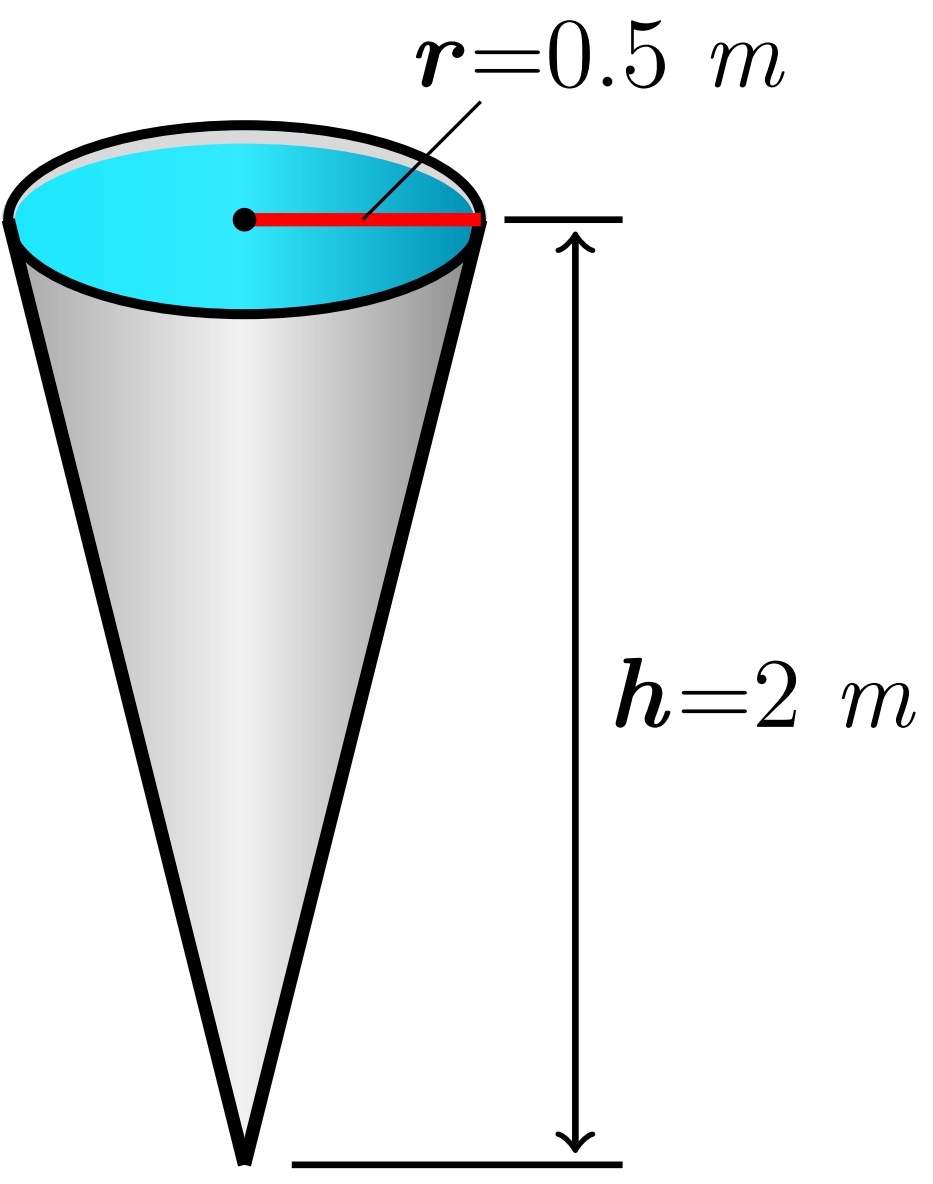

y
4
3
2
1
1
2
3
4
5
6
x
a =< 2, 0 >

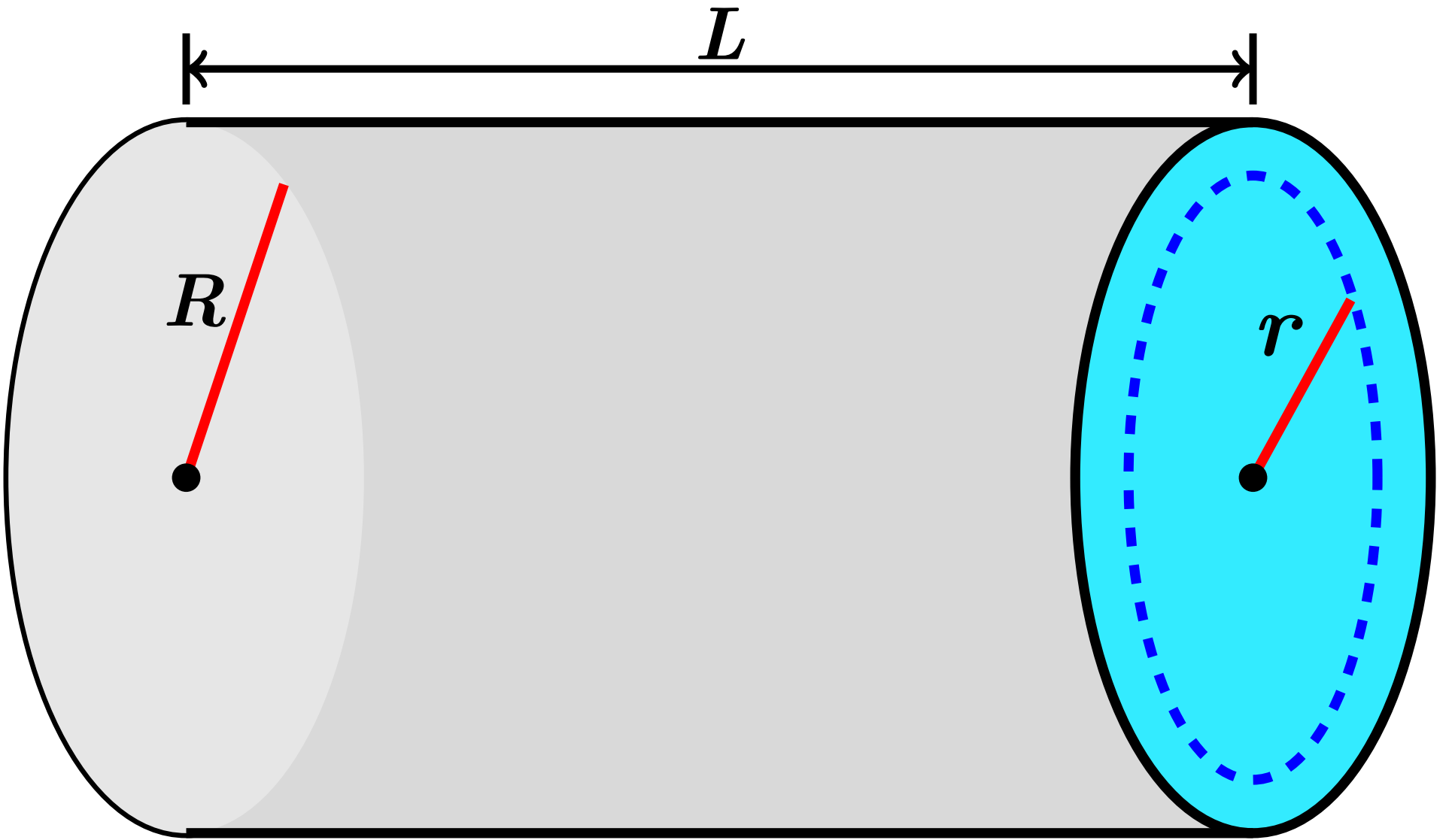

y
3
2
1
-1
1
2
3
x
$\nabla f = -\boldsymbol{i} + \boldsymbol{j}$
$y - x = -1$

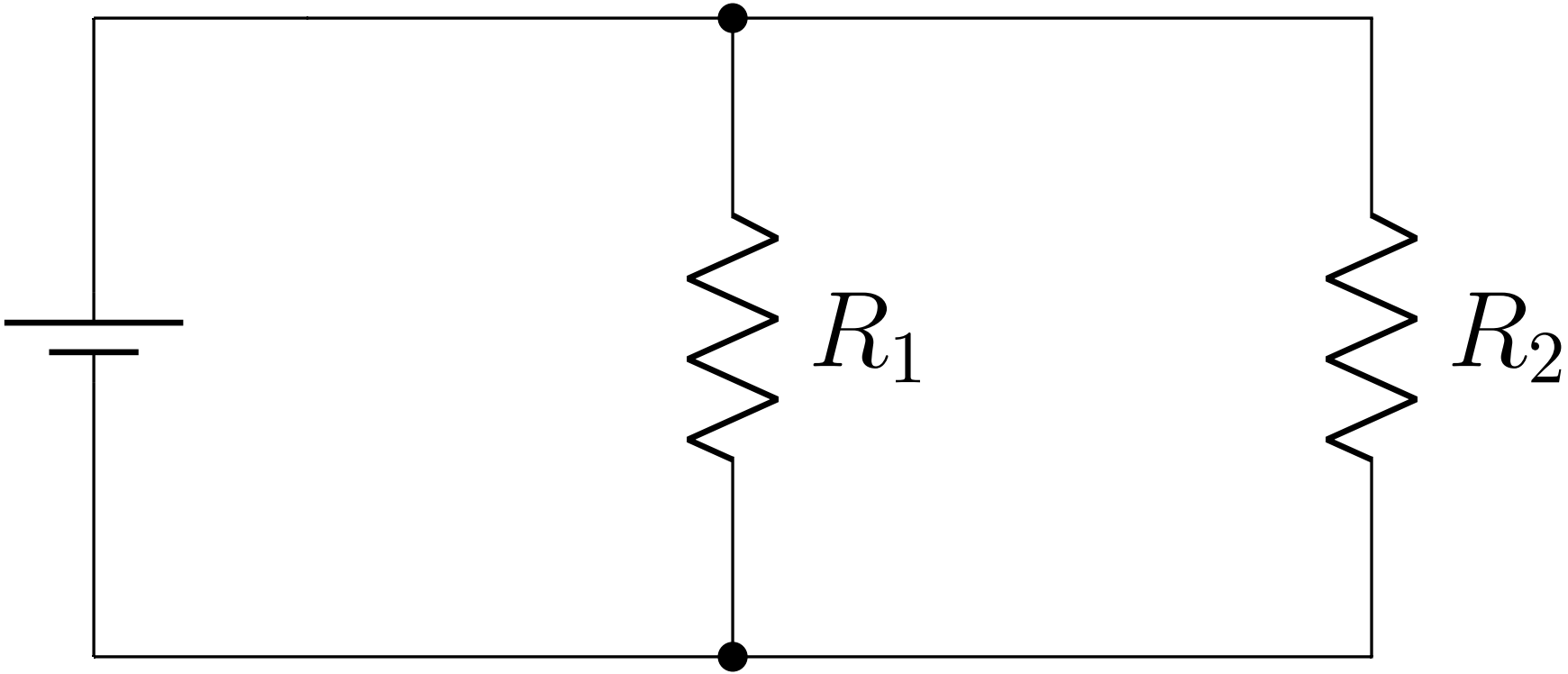

r=10 cm
t=0.1 cm
h=50 cm

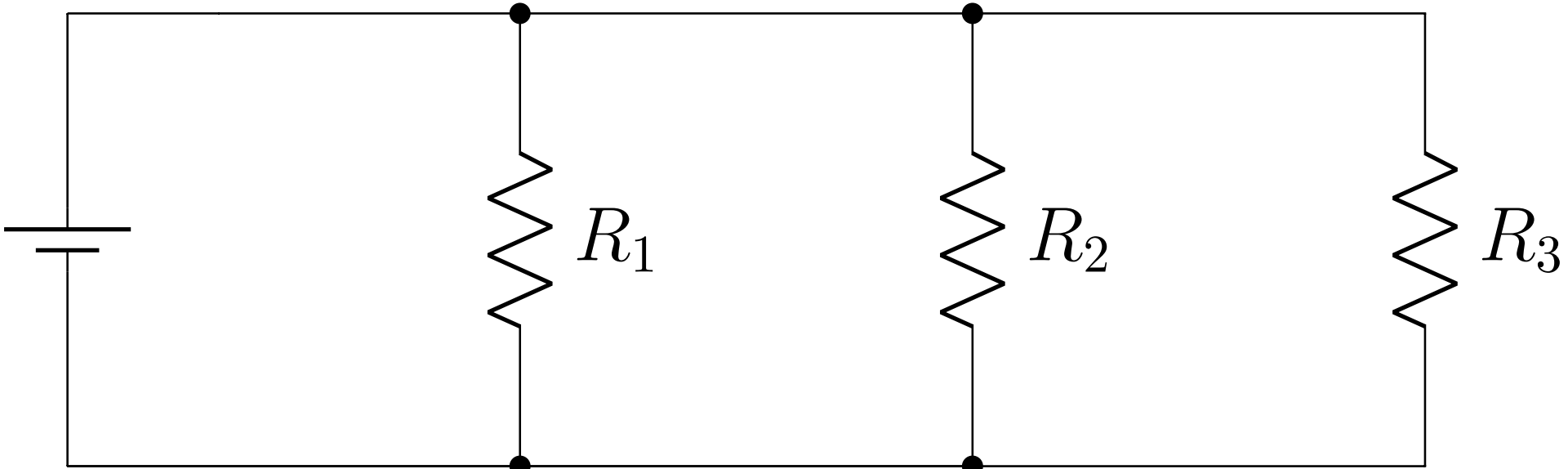


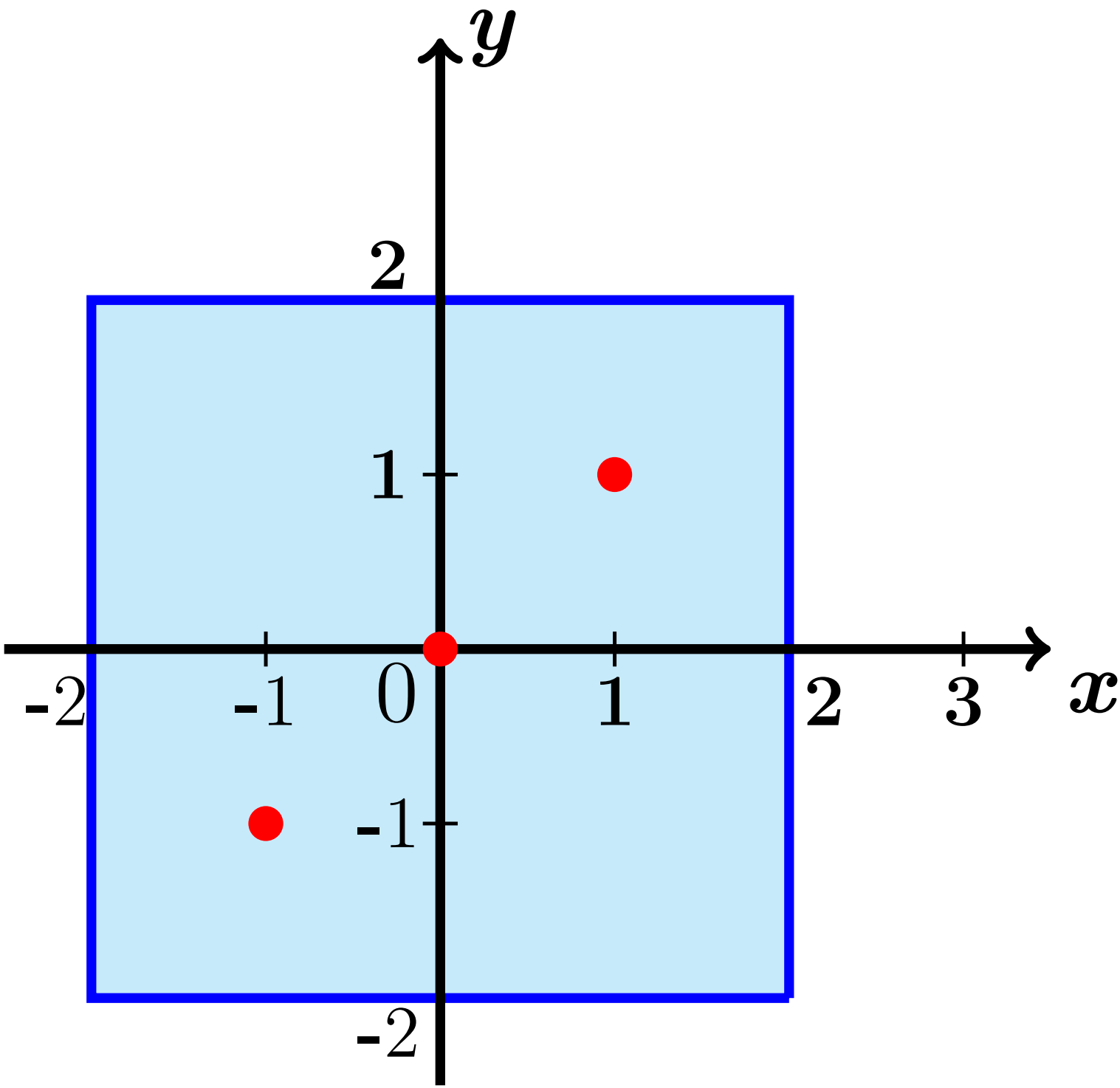
$$\boldsymbol{V} = \frac{\pi}{2}\, r^2 h$$

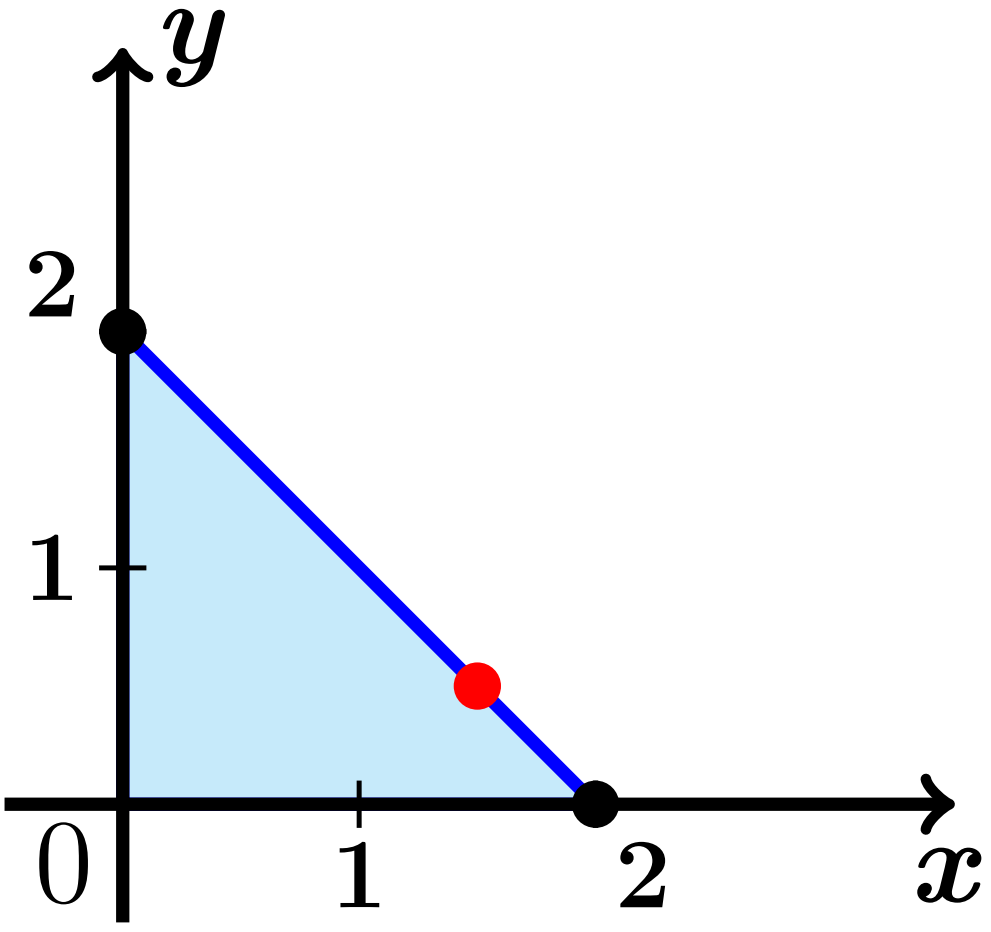

$\boldsymbol{r}=0.5\ m$
$\boldsymbol{h}=2\ m$

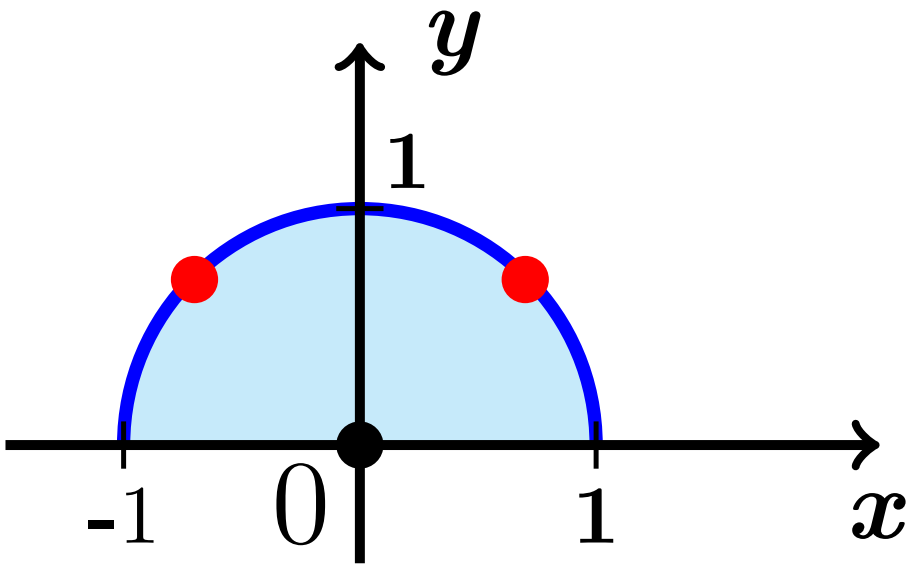

L
R
r

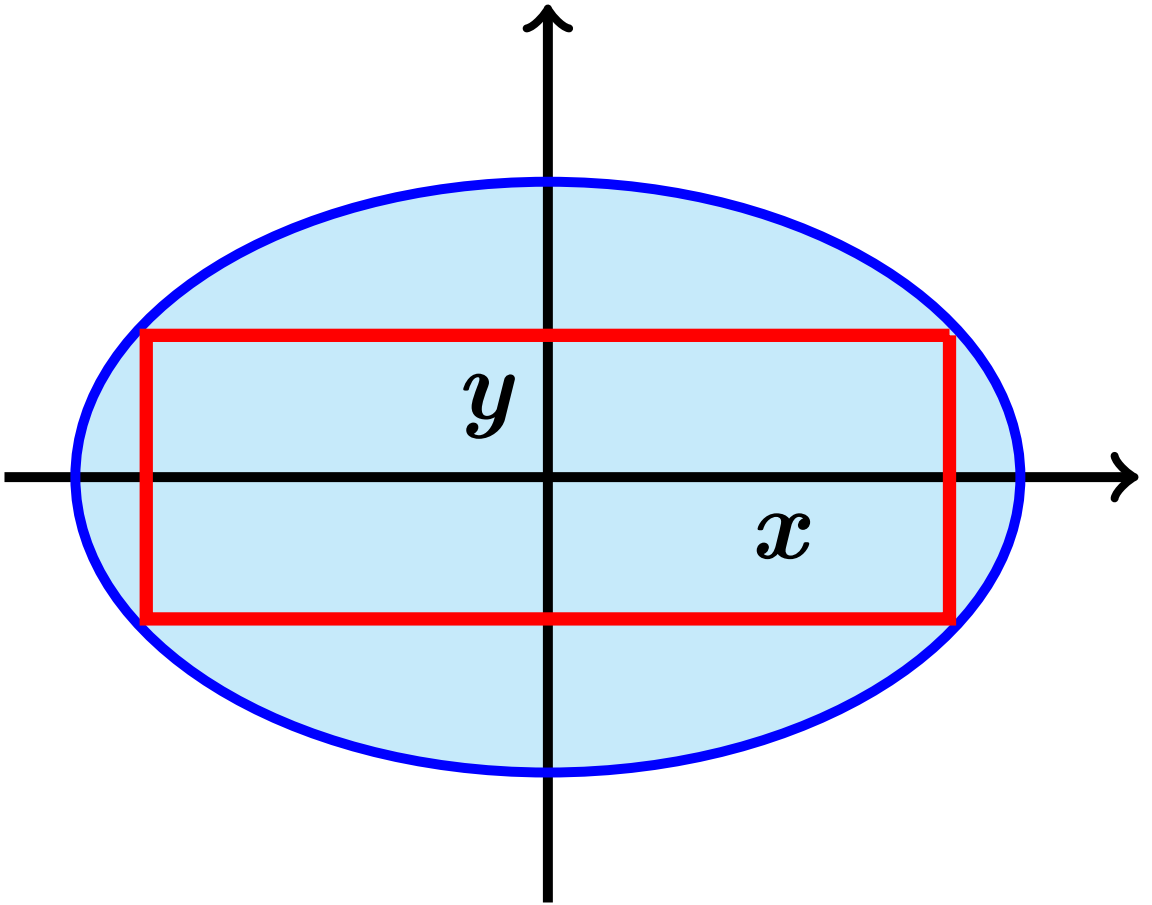

R_1
R_2

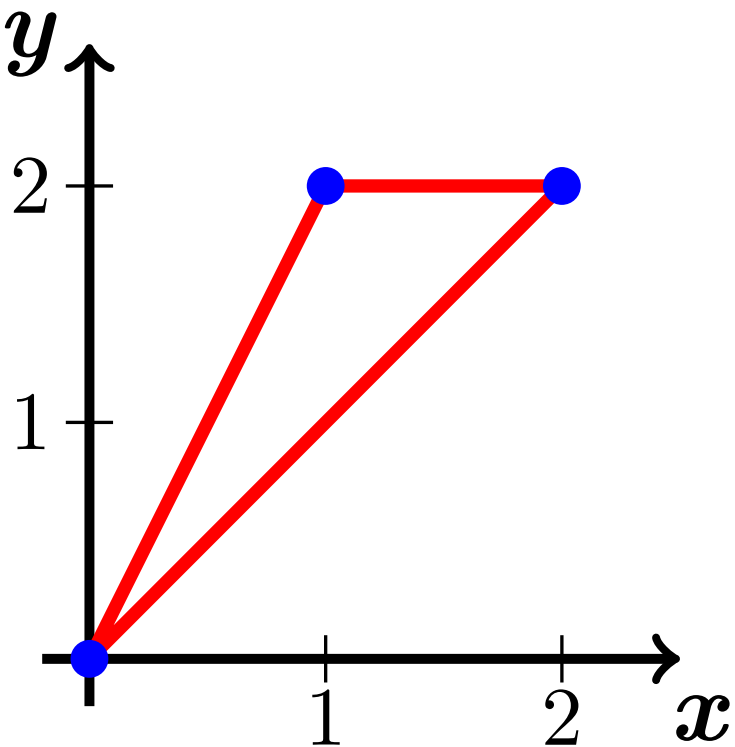

R_1
R_2
R_3

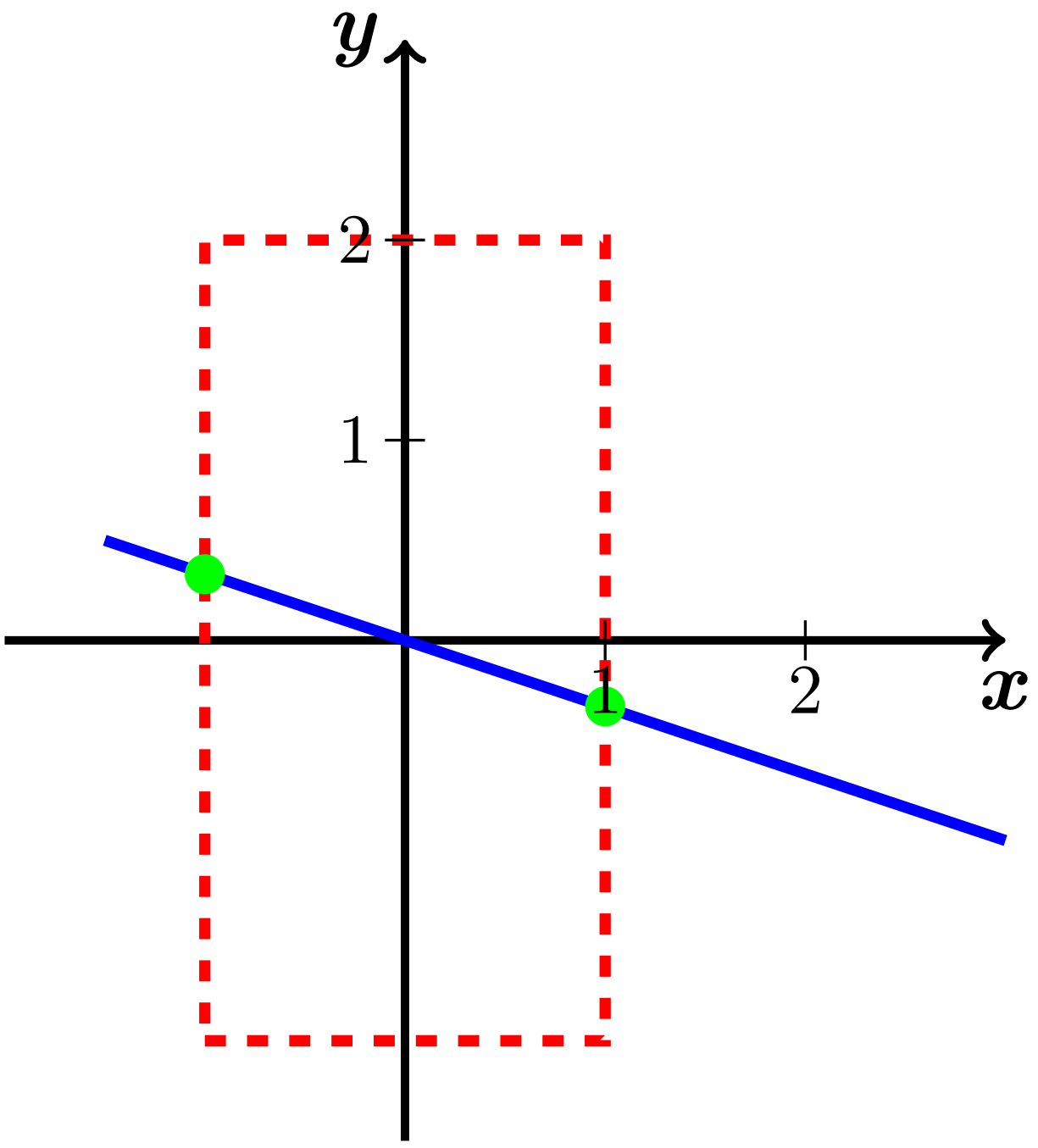

y
2
1
-2
-1
0
1
2
3
x
-1
-2

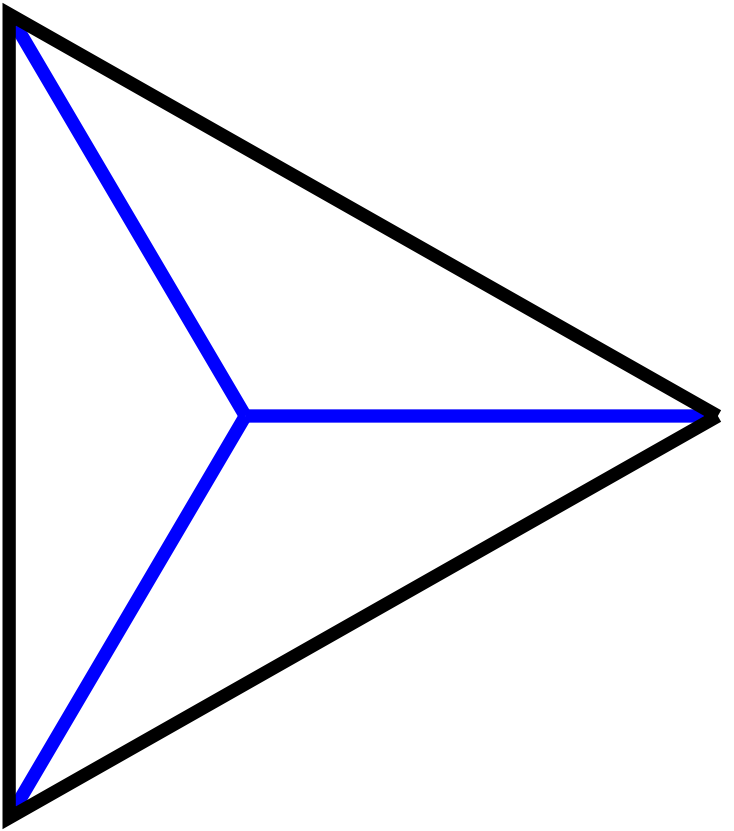

y
2
1
0
1
2
x

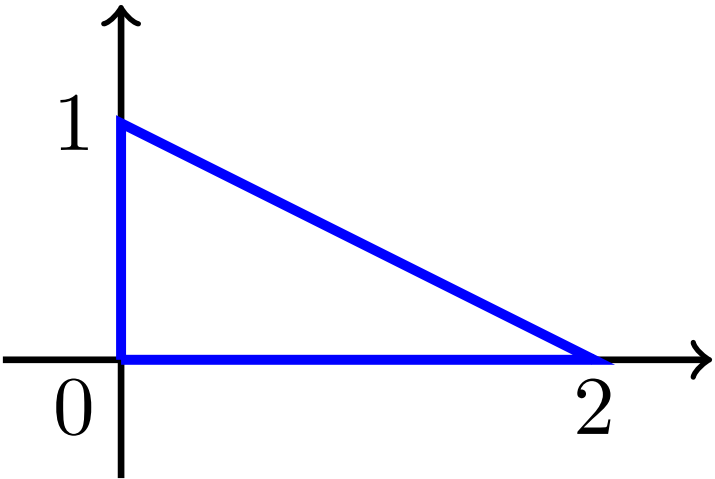

y
1
-1
0
1
x

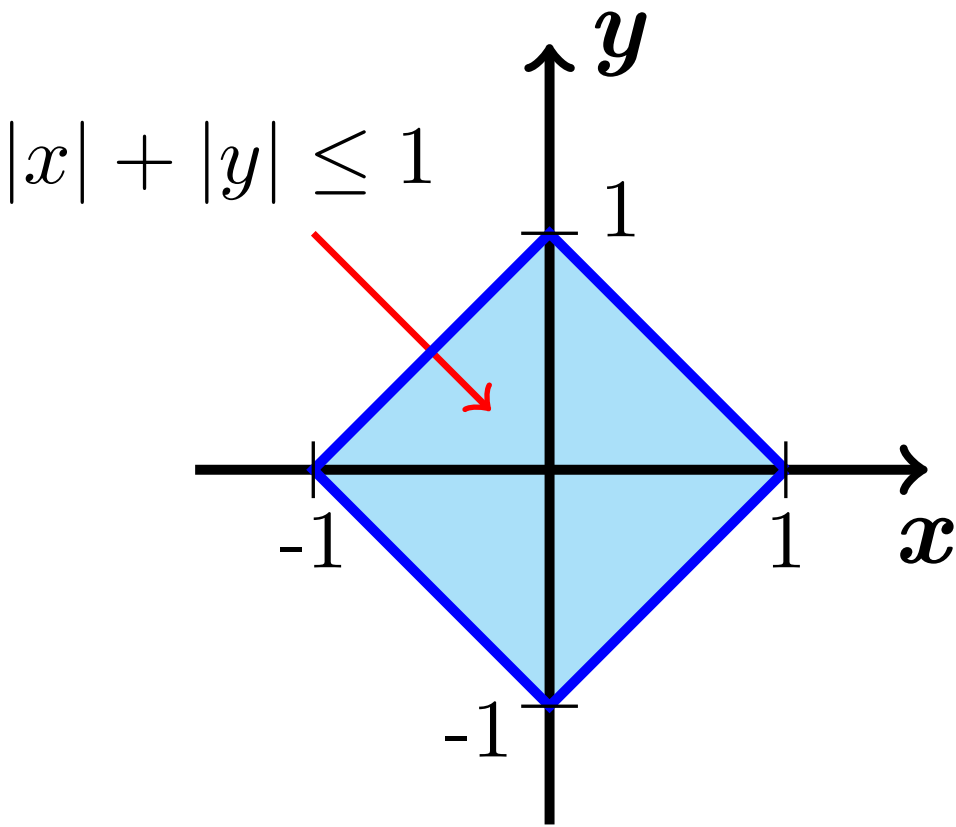

y
x

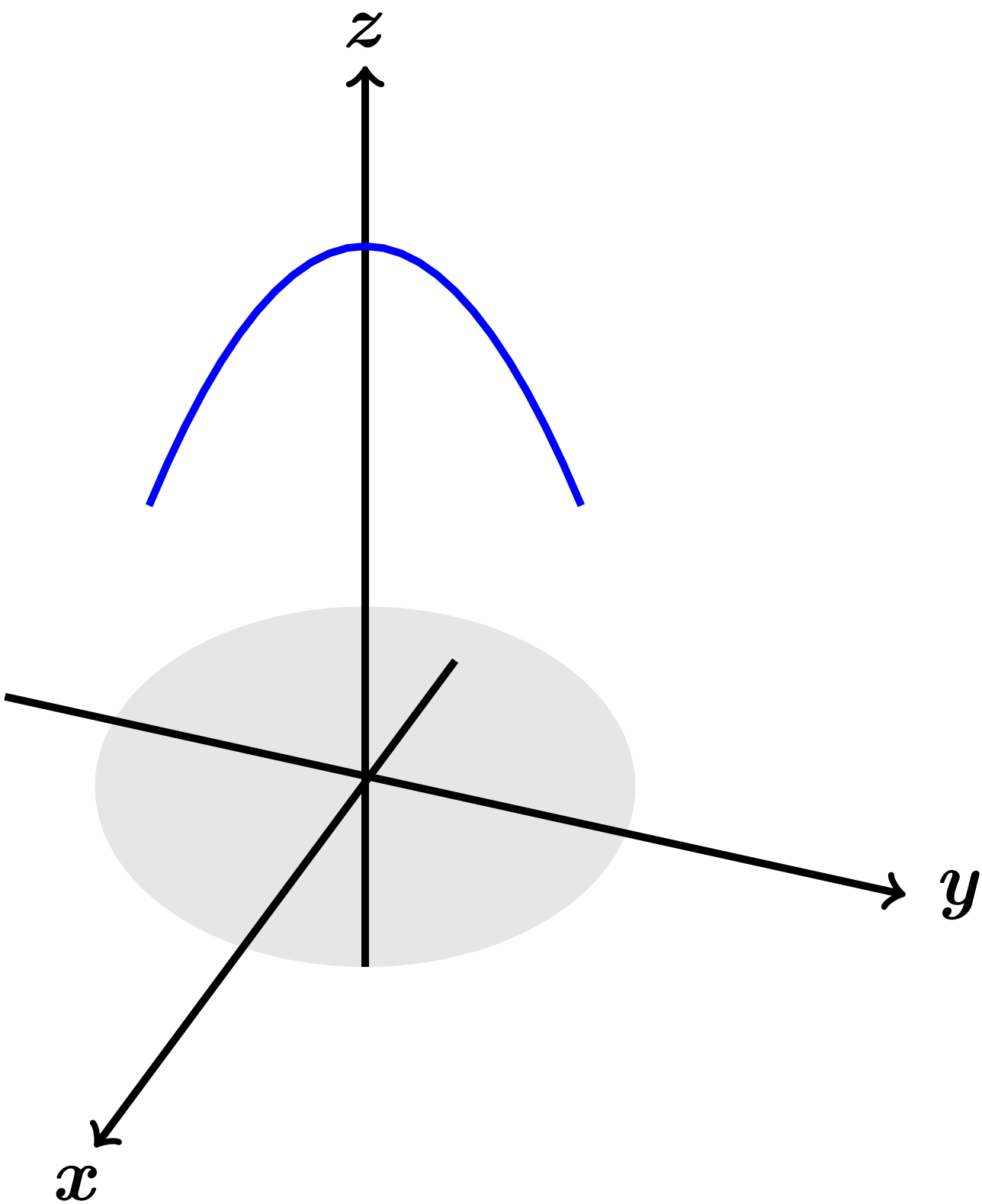

y
2
1
1
2
x

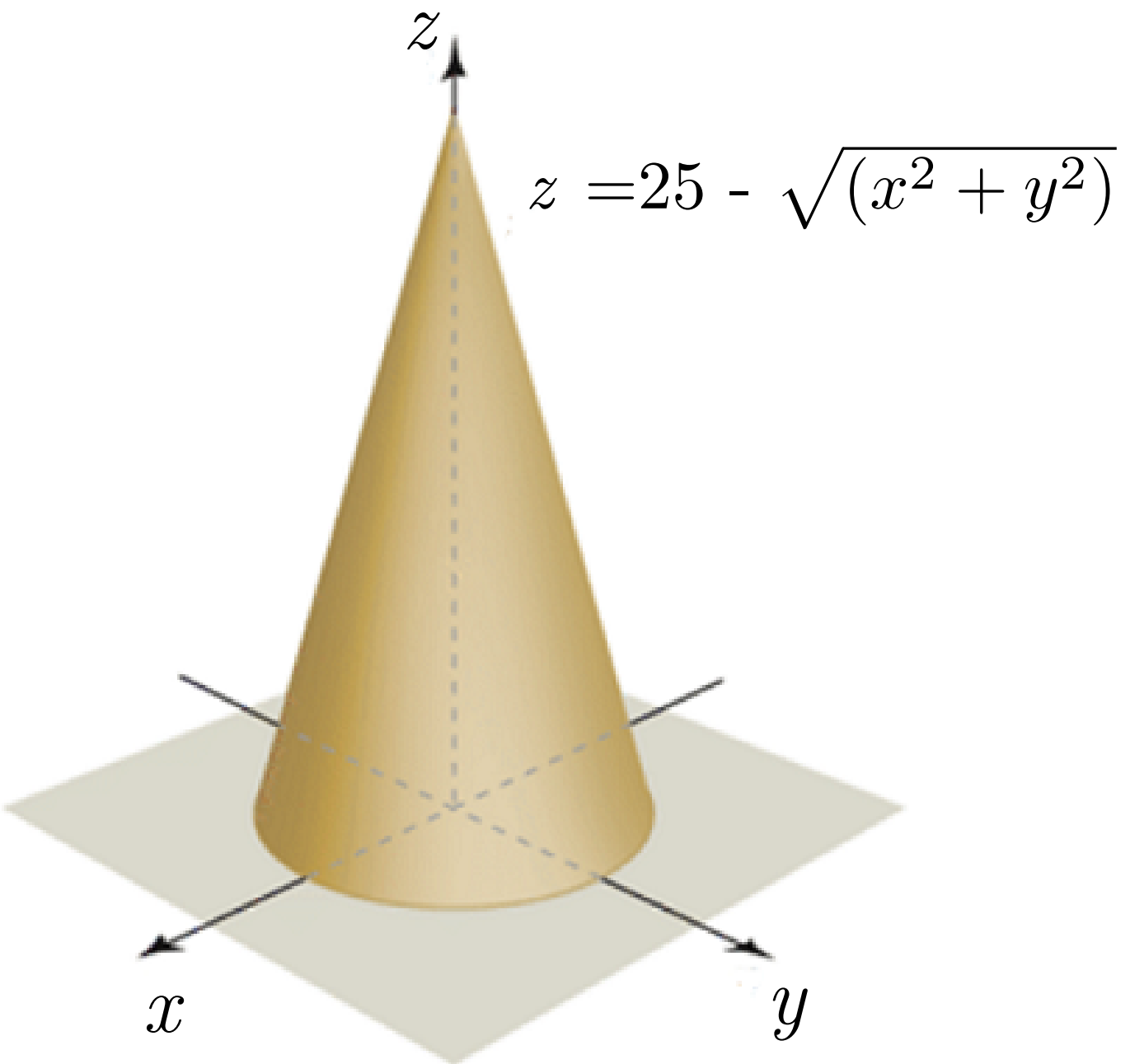

y
2
1
1
2
x

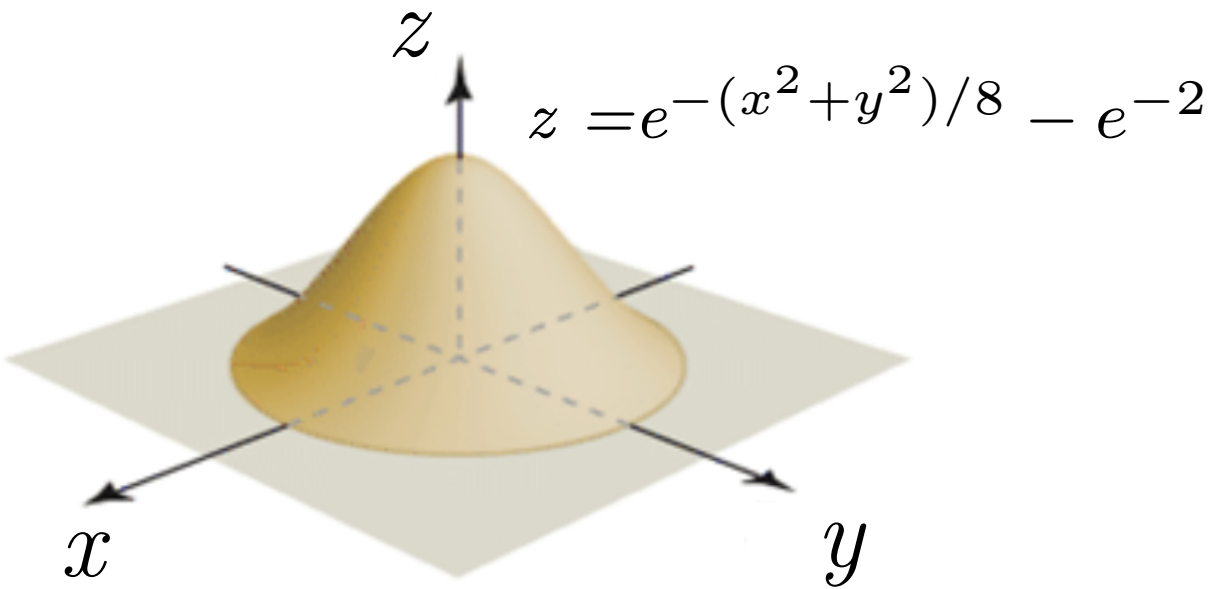


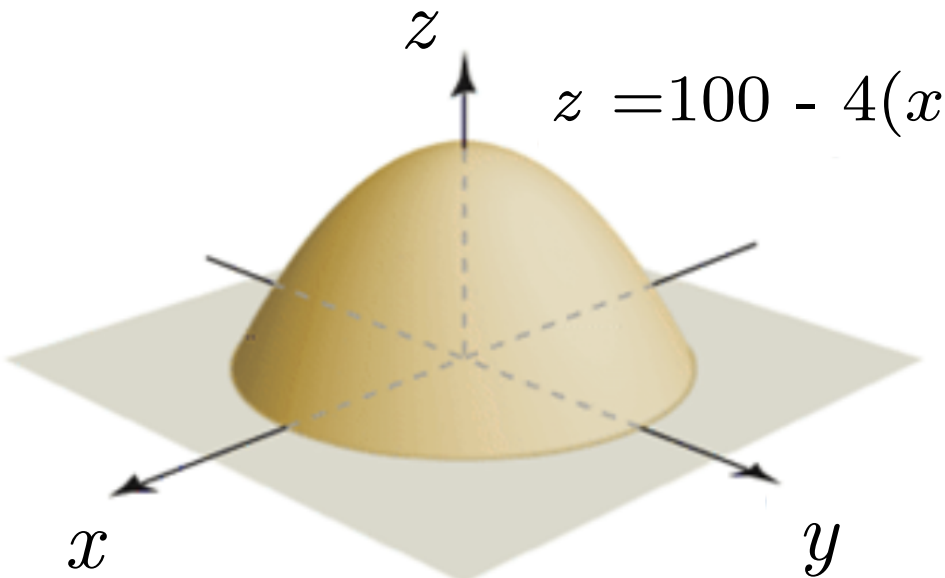

1
0
2


$|x| + |y| \leq 1$
y
1
-1
1
x
-1

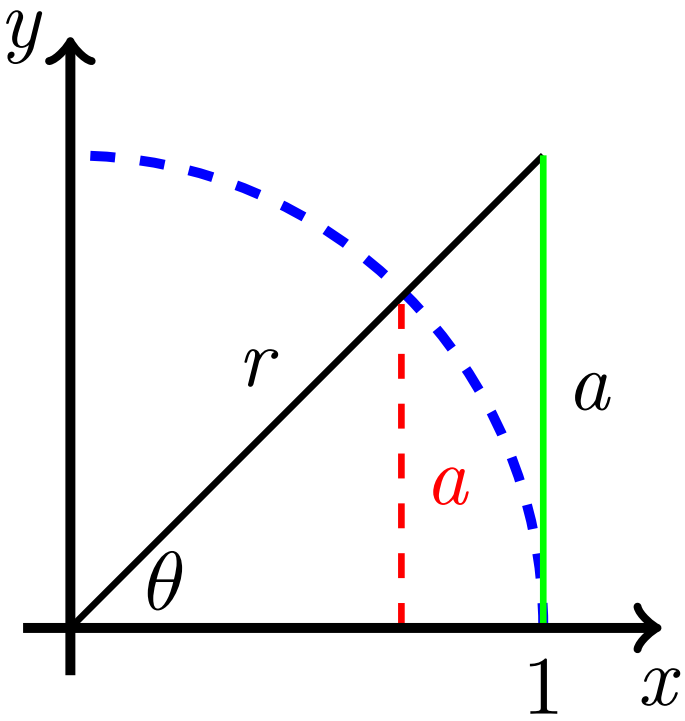

z
y
x

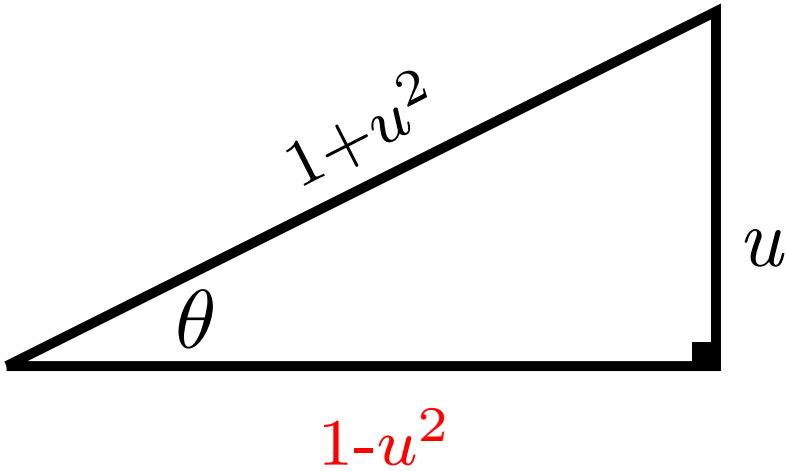

z
z =25 - √(x² + y²)
x
y

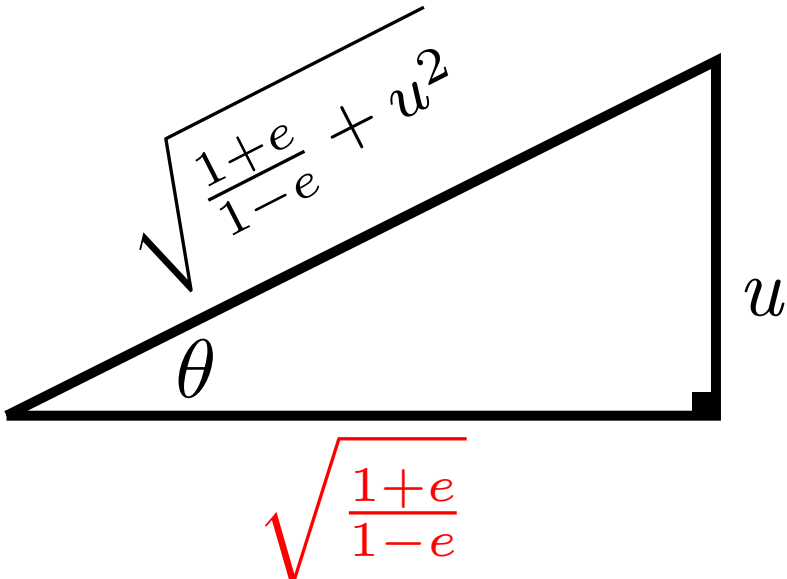

z
z = e^{-(x^2+y^2)/8} - e^{-2}
x
y

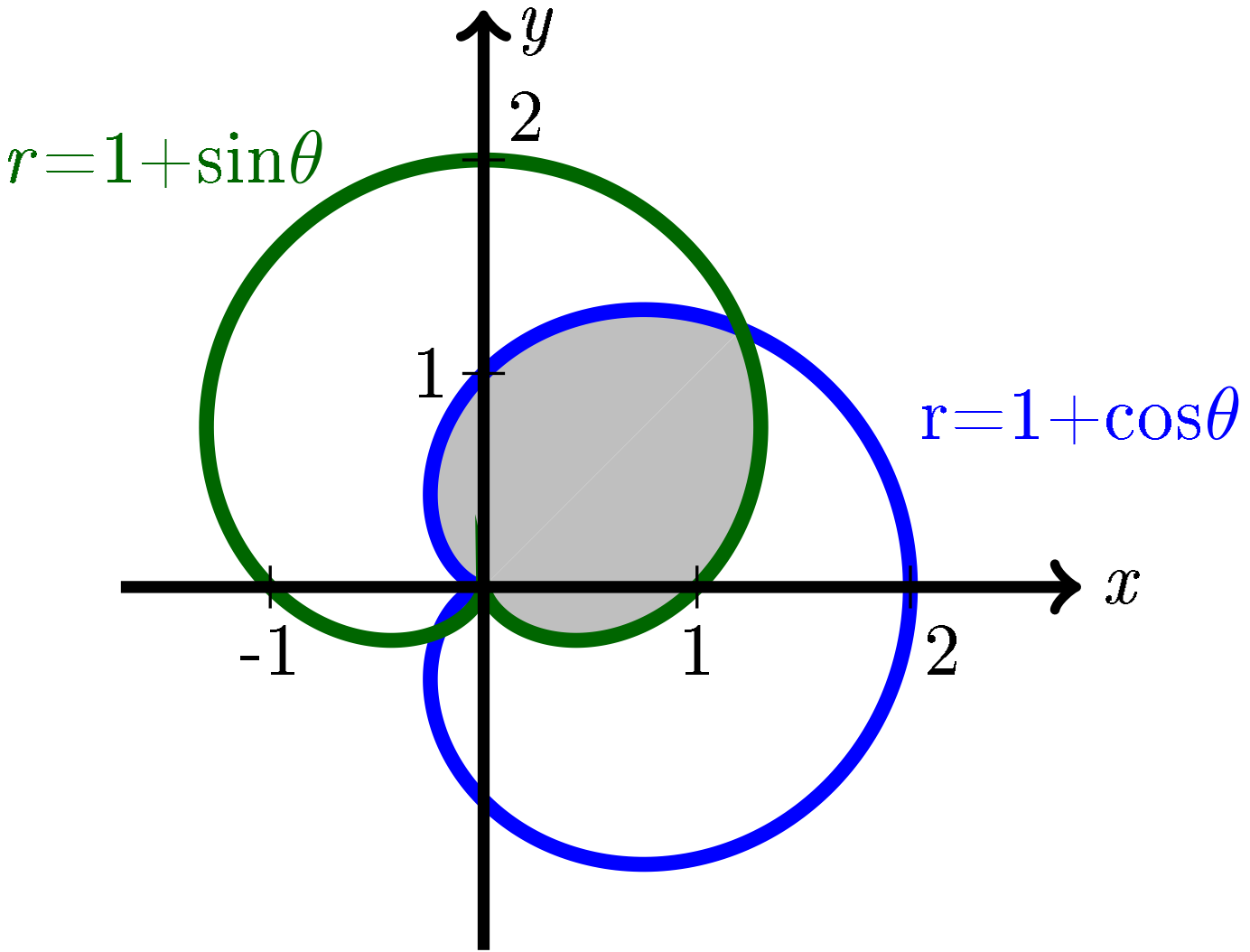


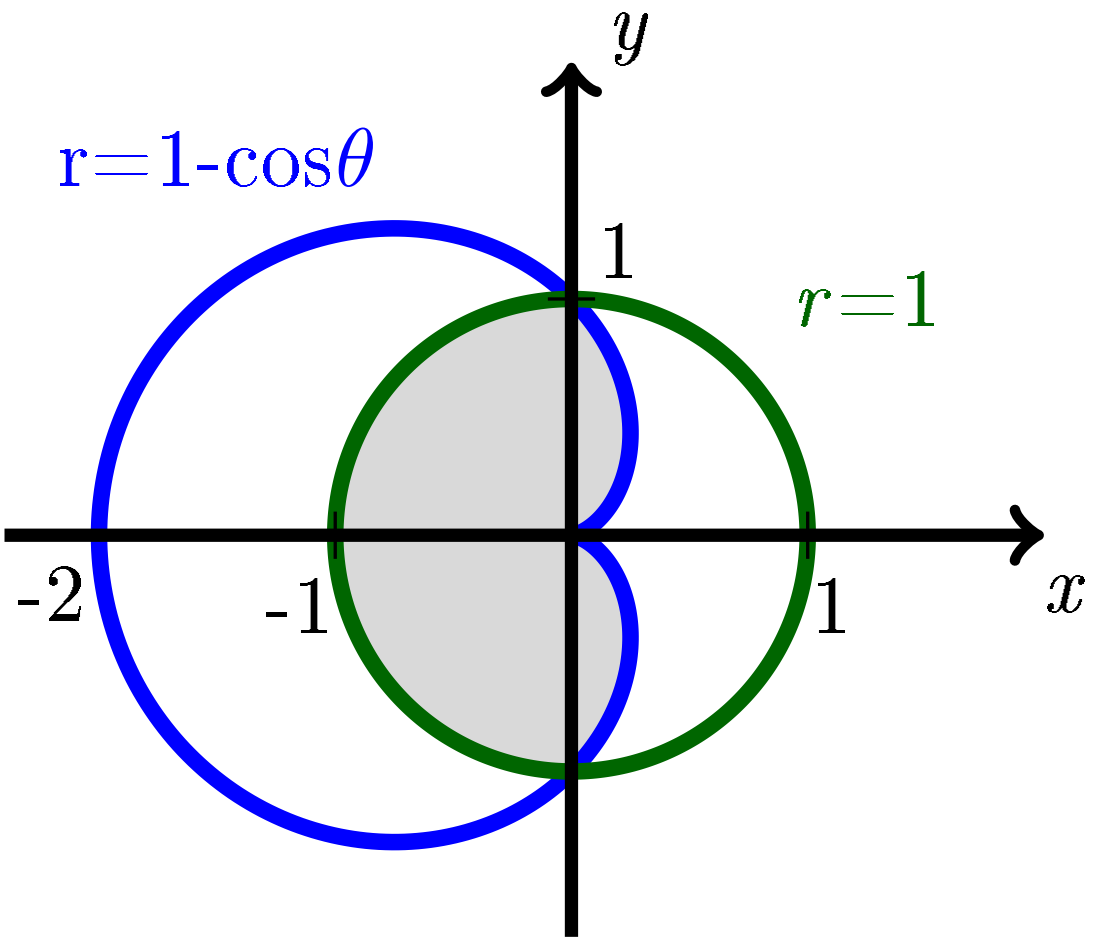
$z = 100 - 4(x^2 + y^2)$

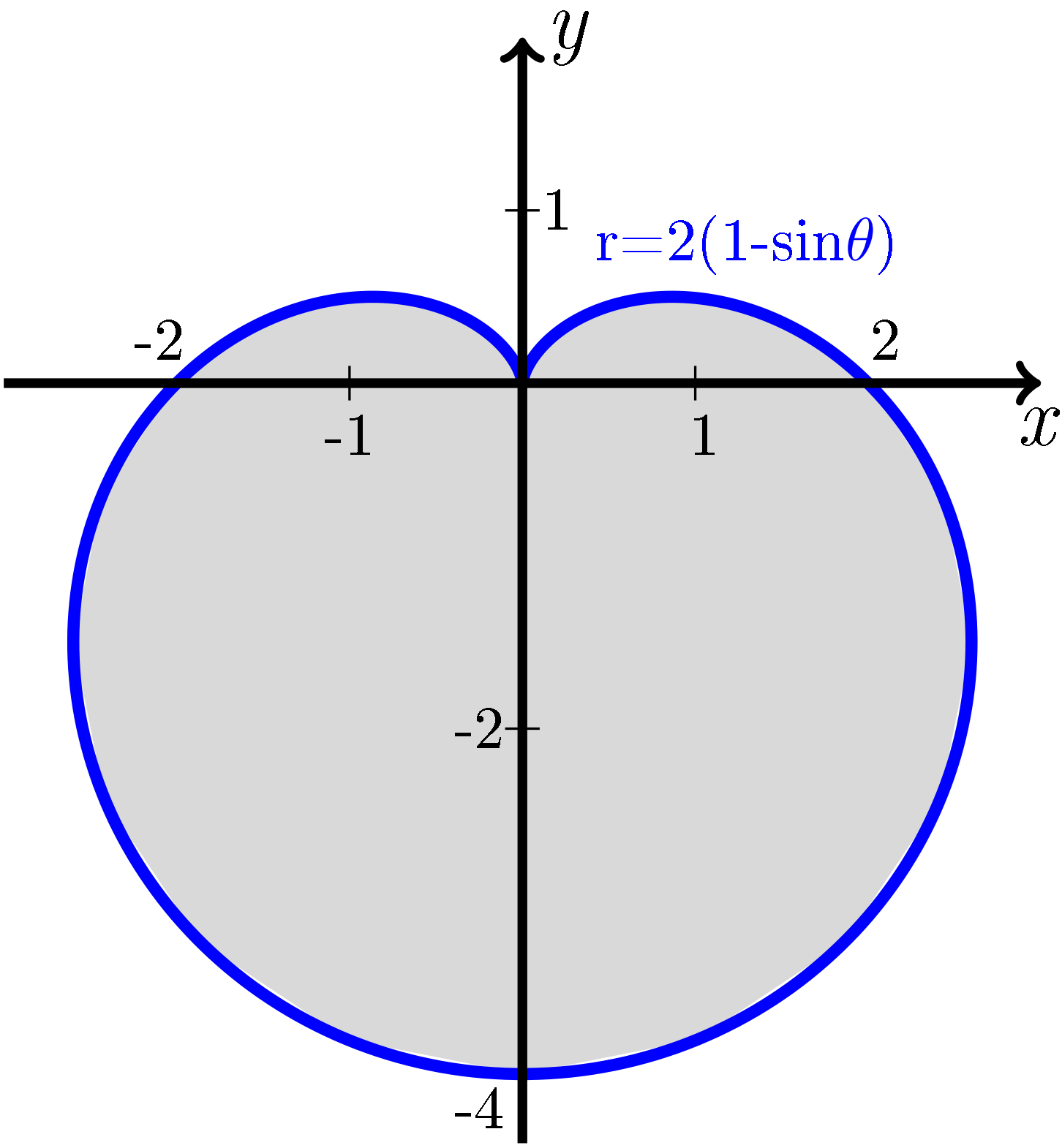

y
r
a
a
θ
1
x

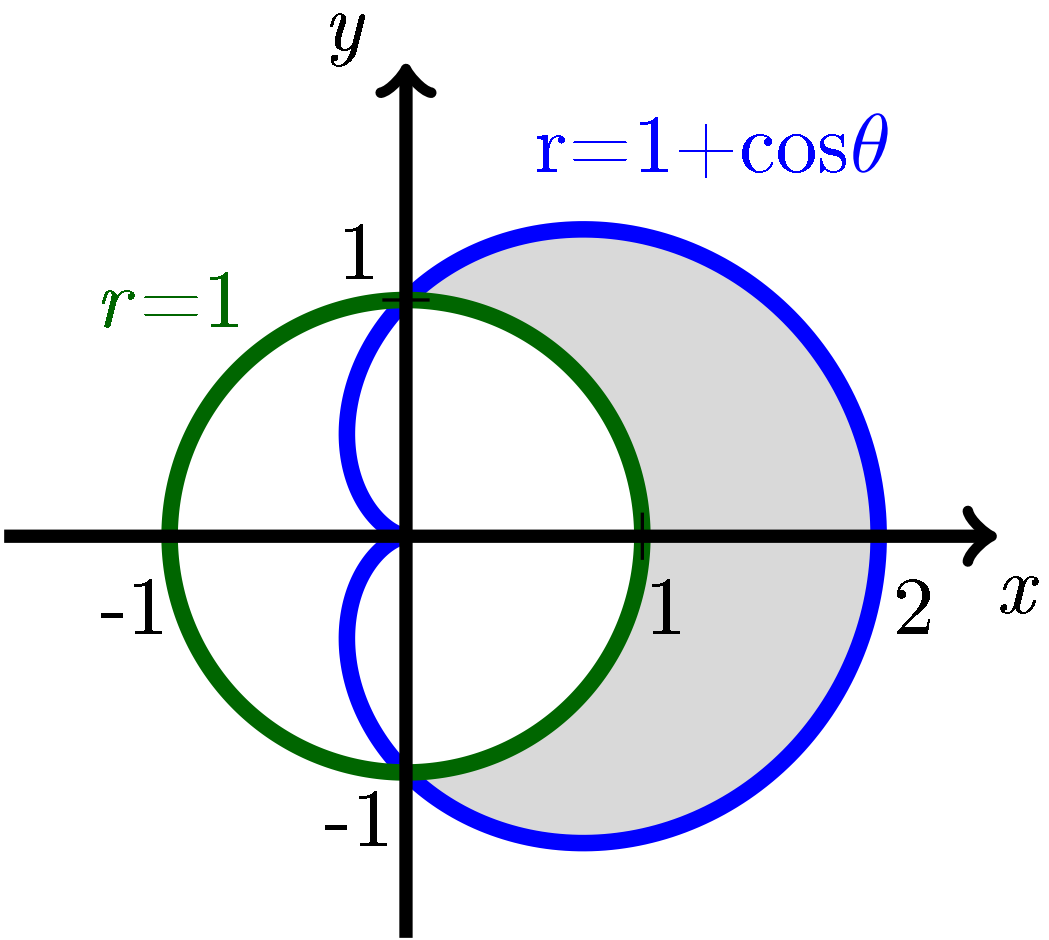

$1+u^2$
u
θ
$1-u^2$

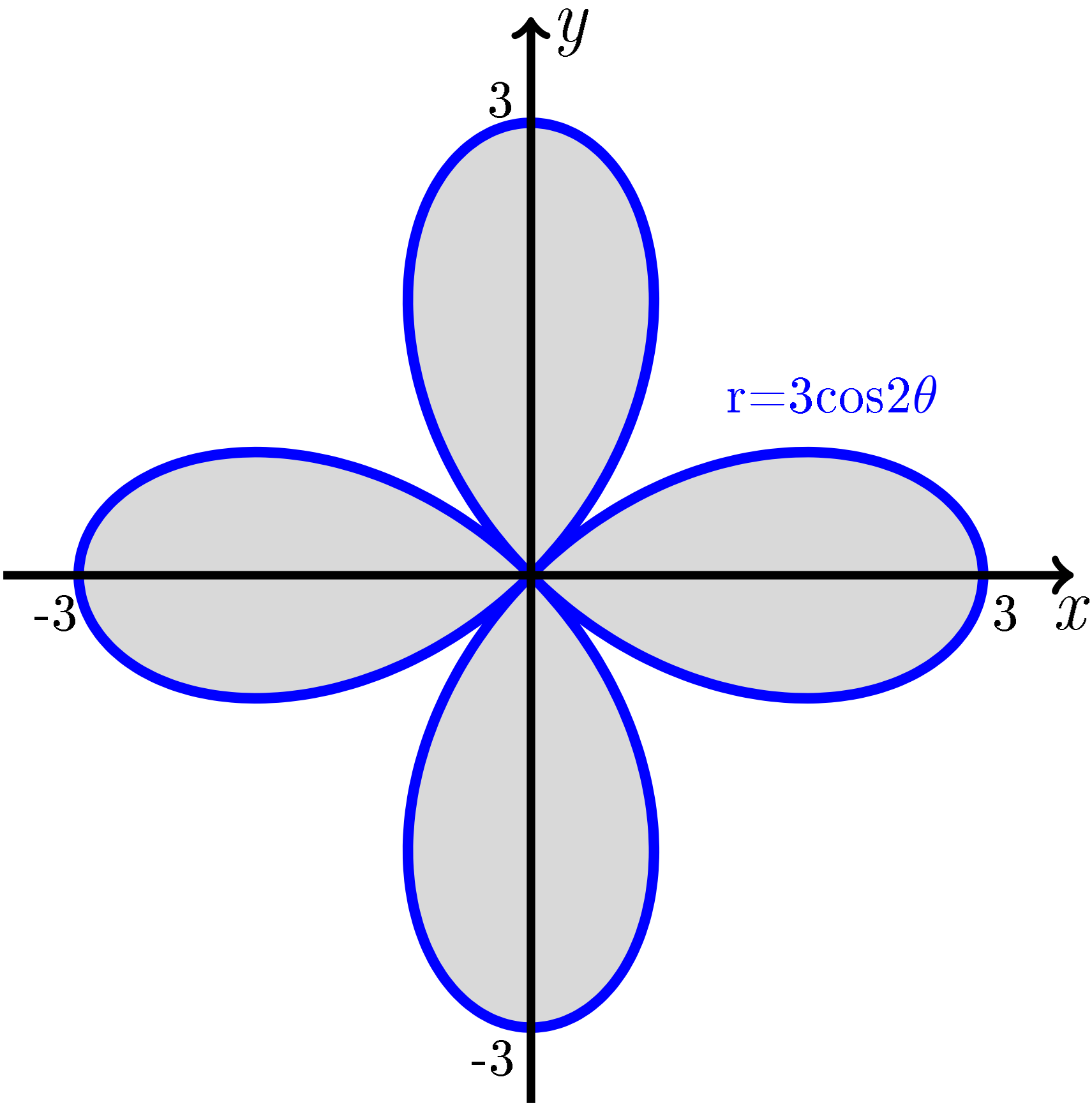

$\sqrt{\frac{1+e}{1-e}+u^2}$
u
θ
$\sqrt{\frac{1+e}{1-e}}$

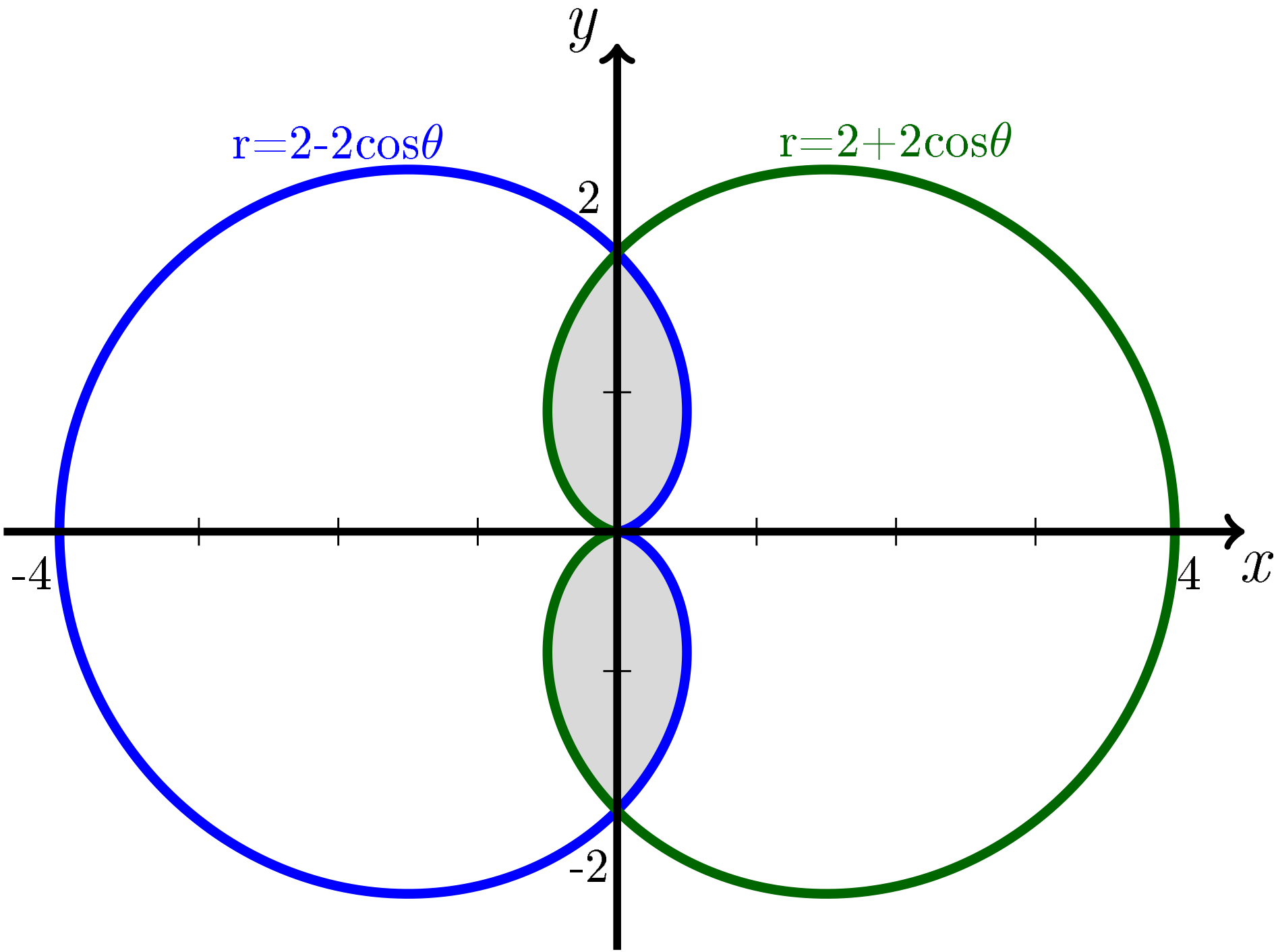

$r=1+\sin\theta$
y
2
1
$\mathrm{r}=1+\cos\theta$
x
-1
1
2

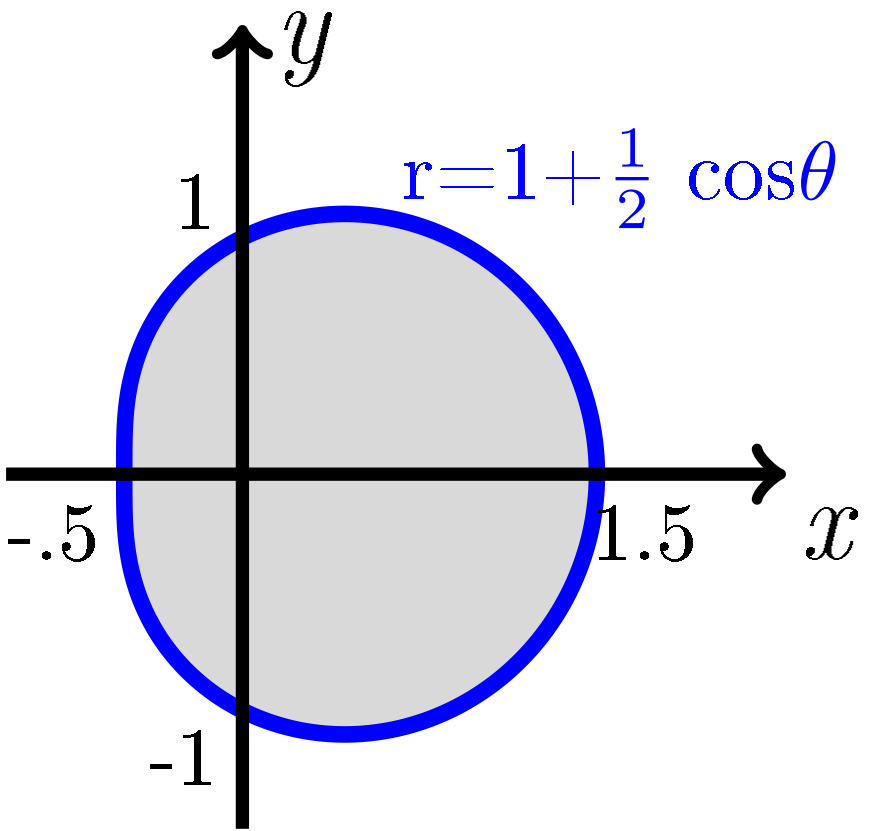

r=1-cosθ
r=1
y
x
1
-2
-1
1

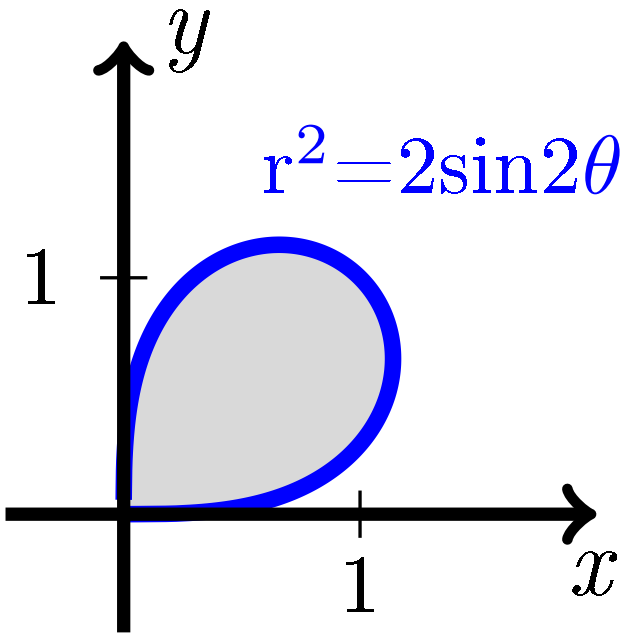

y
1
r=2(1-sinθ)
-2
2
-1
1
x
-2
-4

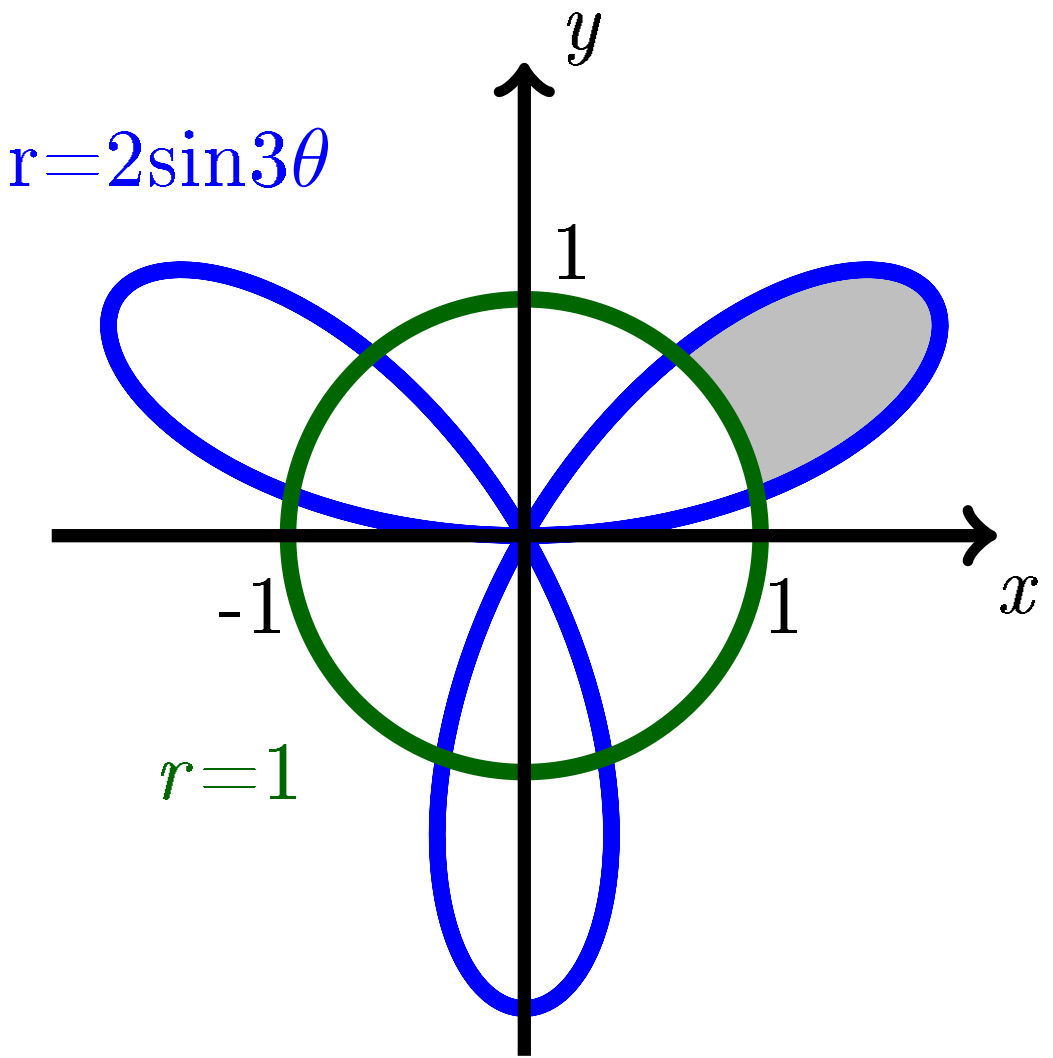

y
r=1+cosθ
1
r=1
-1
1
2
x
-1

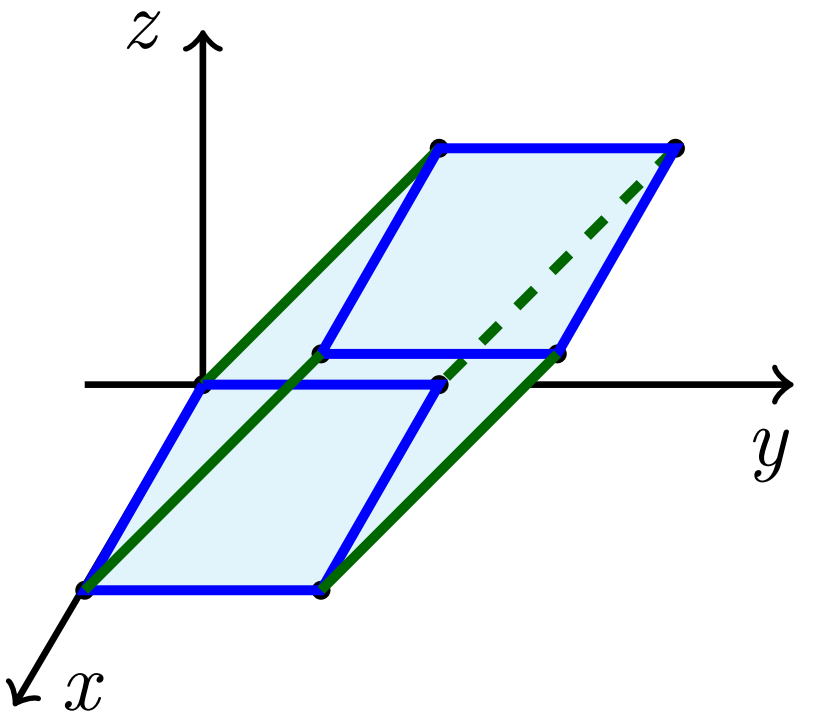

y
3
-3
3
x
-3
r=3cos2θ

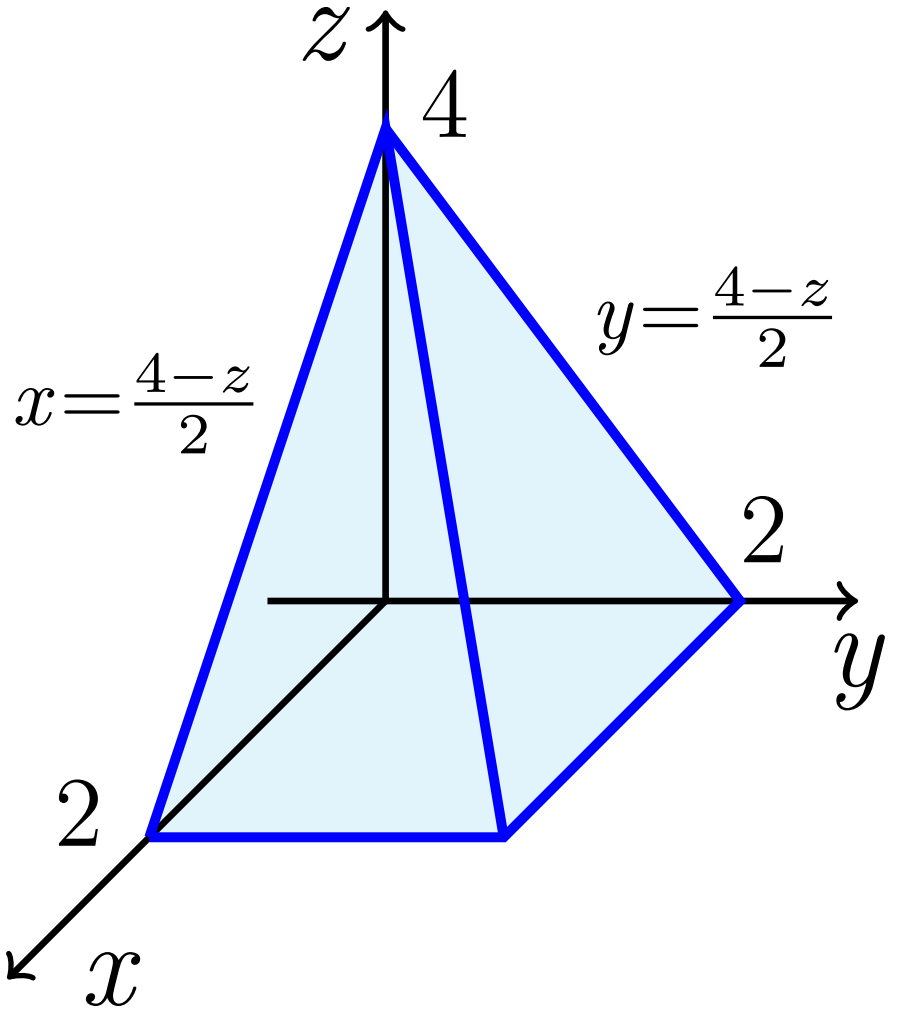

y
r=2-2cosθ
r=2+2cosθ
2
-4
4
x
-2

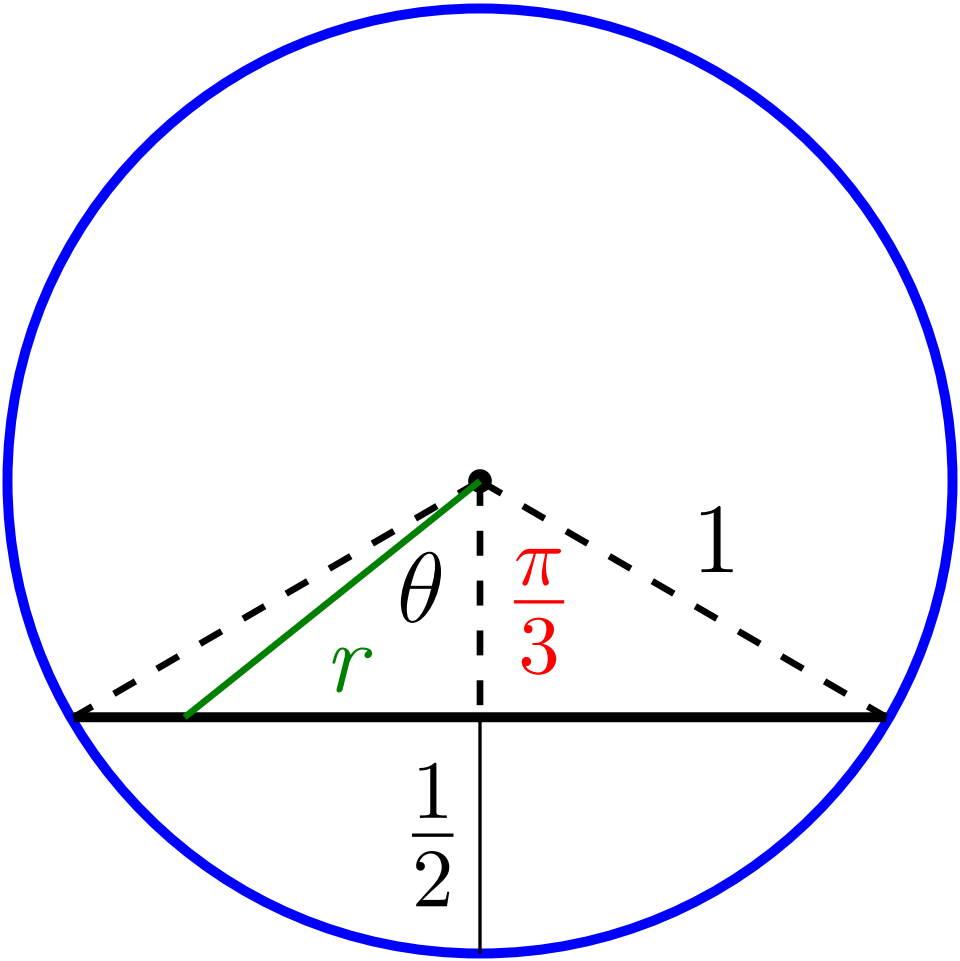

y
1
r=1+1/2 cosθ
-.5
1.5
x
-1

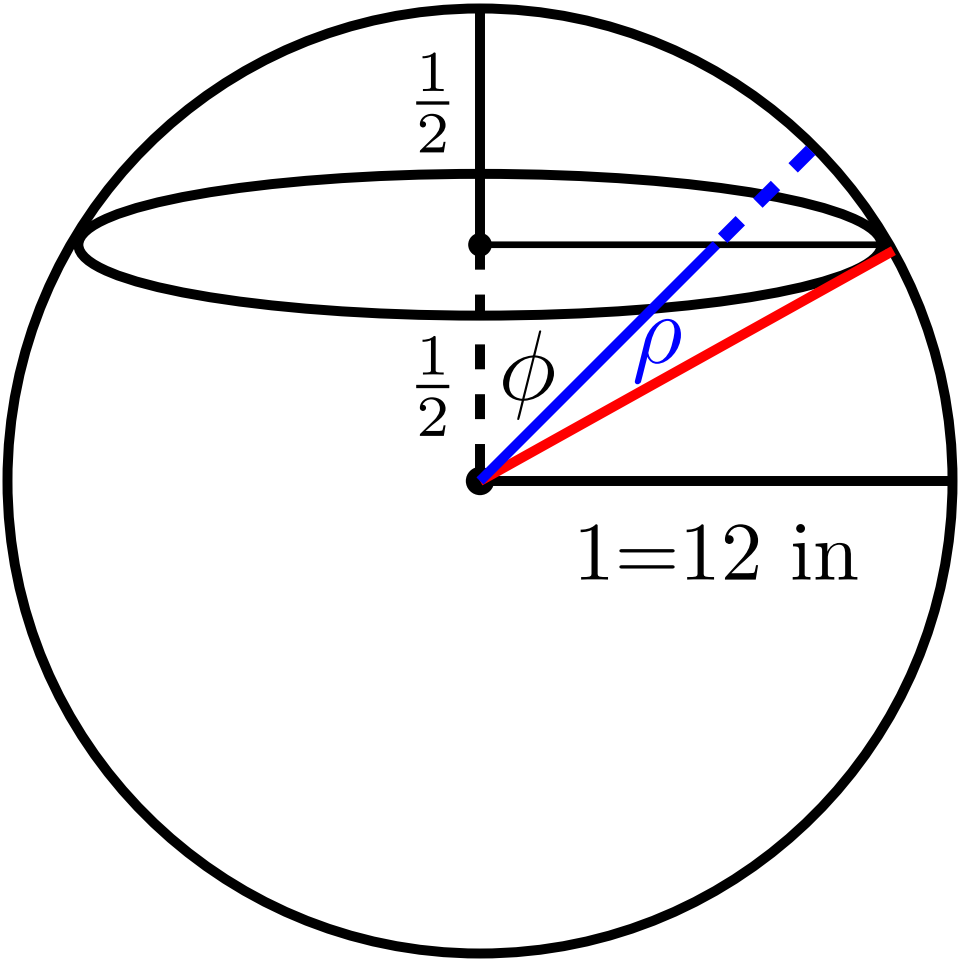

y
r²=2sin2θ
1
1
x

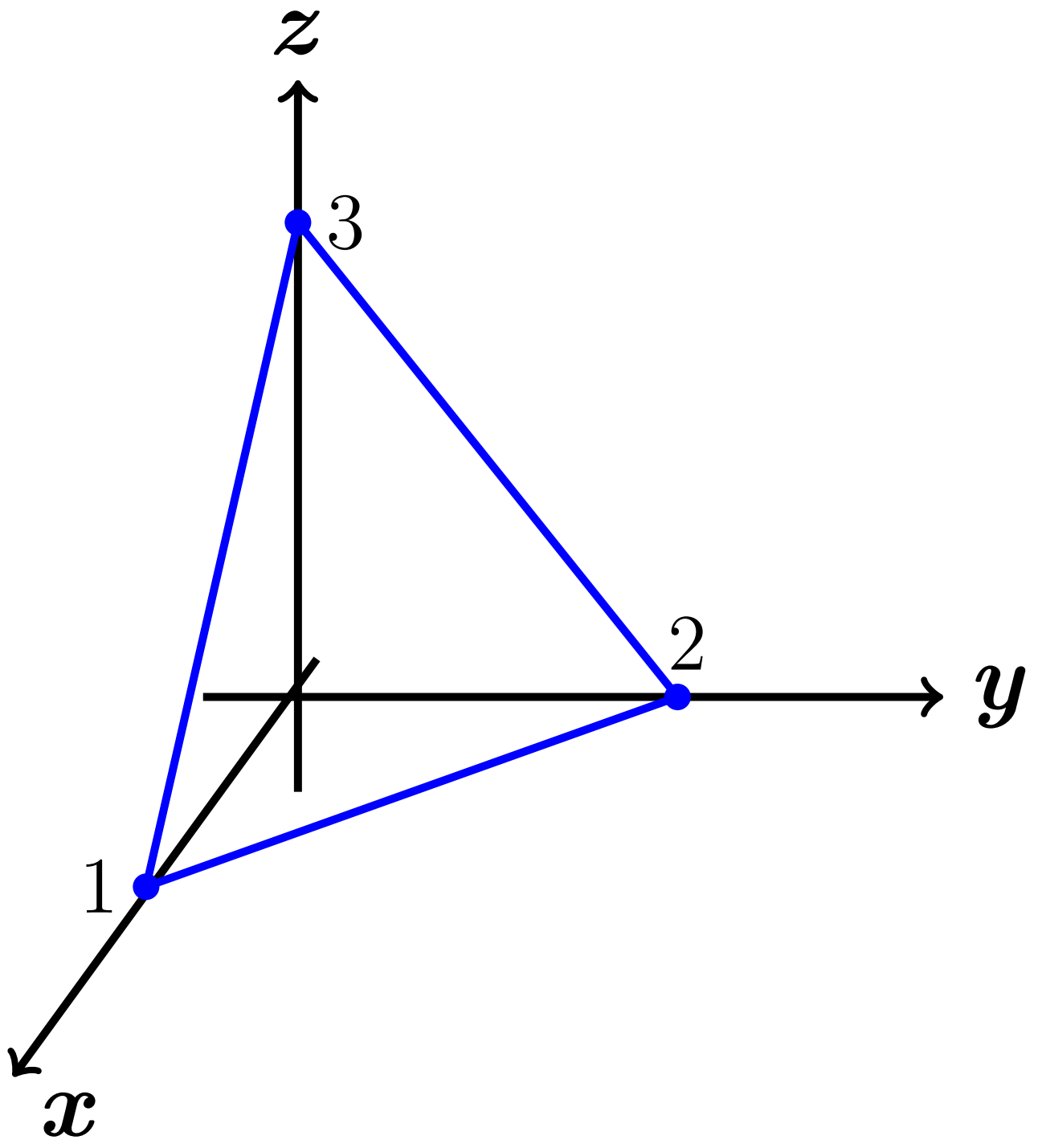

y
r=2sin3θ
1
-1
1
x
r=1

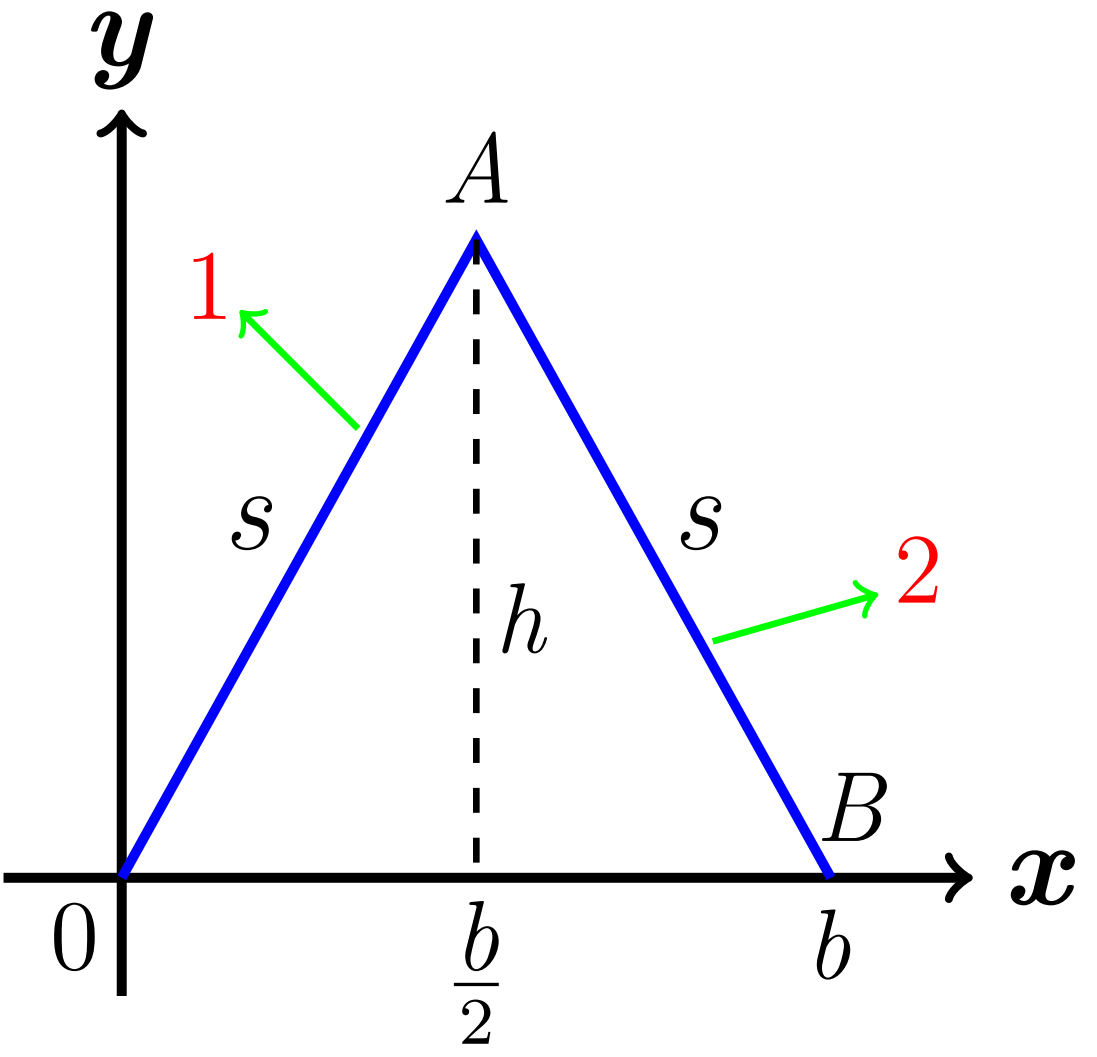

z
y
x

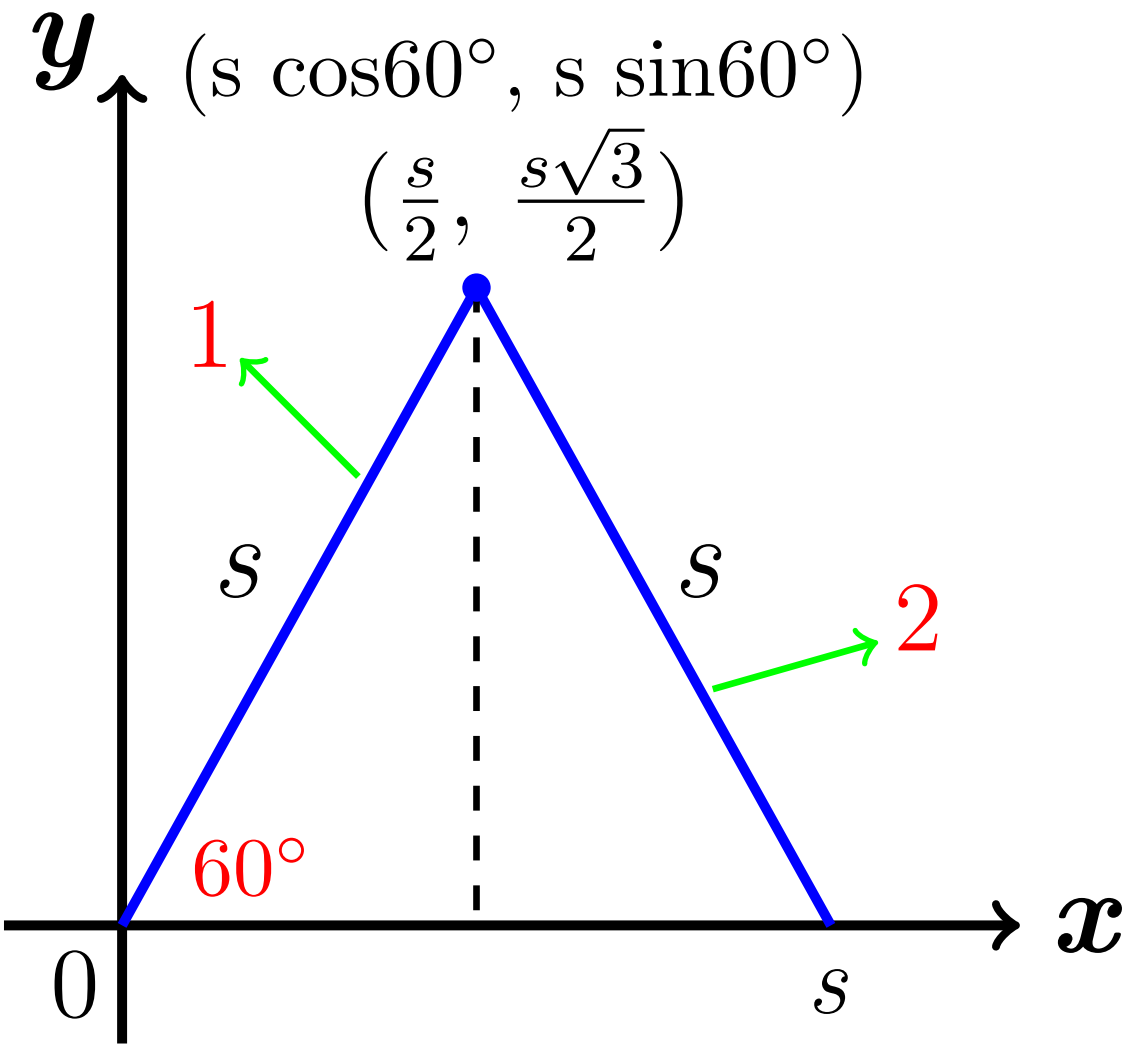

z
4
$y = \frac{4-z}{2}$
$x = \frac{4-z}{2}$
2
y
2
x

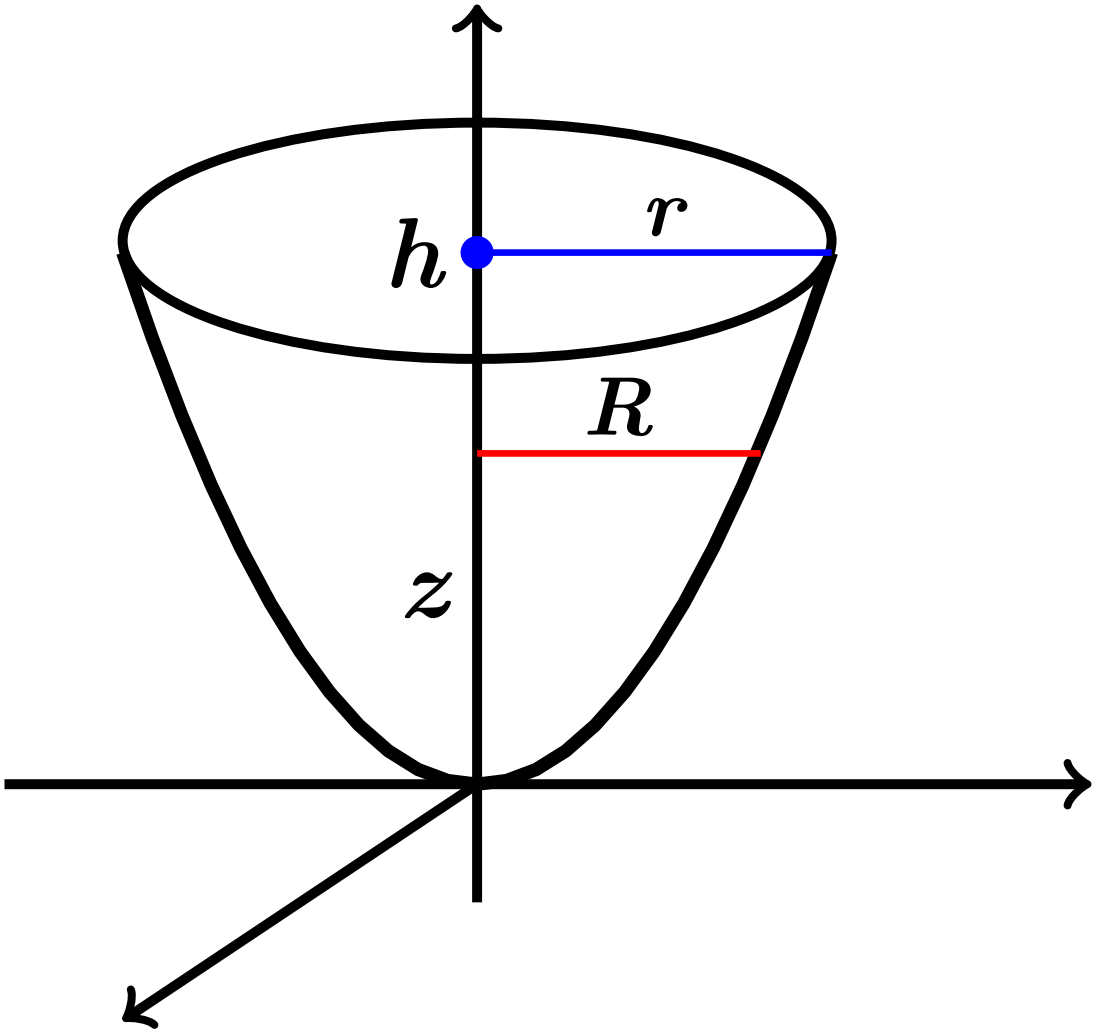

θ
$\frac{\pi}{3}$
1
r
$\frac{1}{2}$

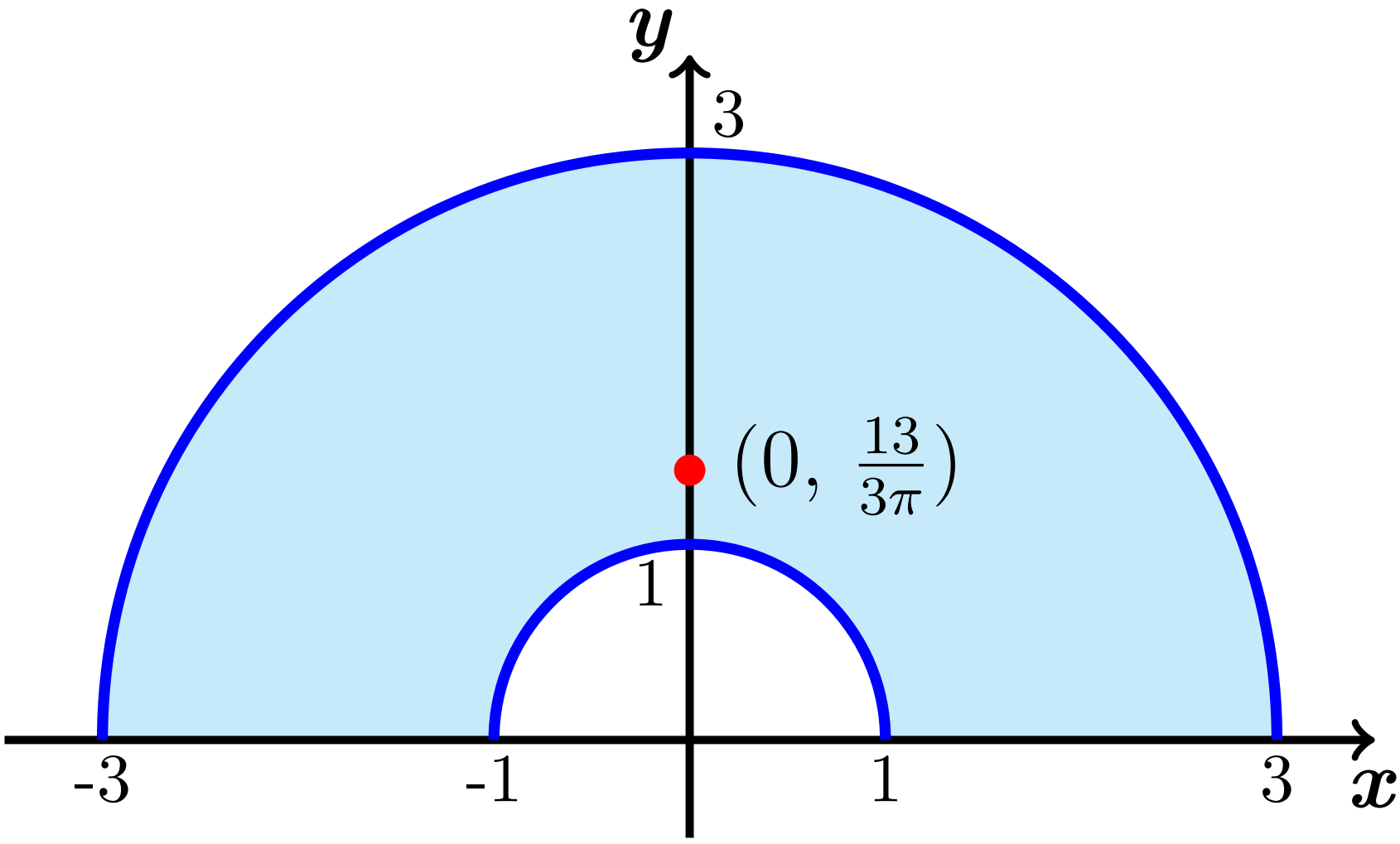

$\frac{1}{2}$
$\frac{1}{2}$
ϕ
ρ
1=12 in

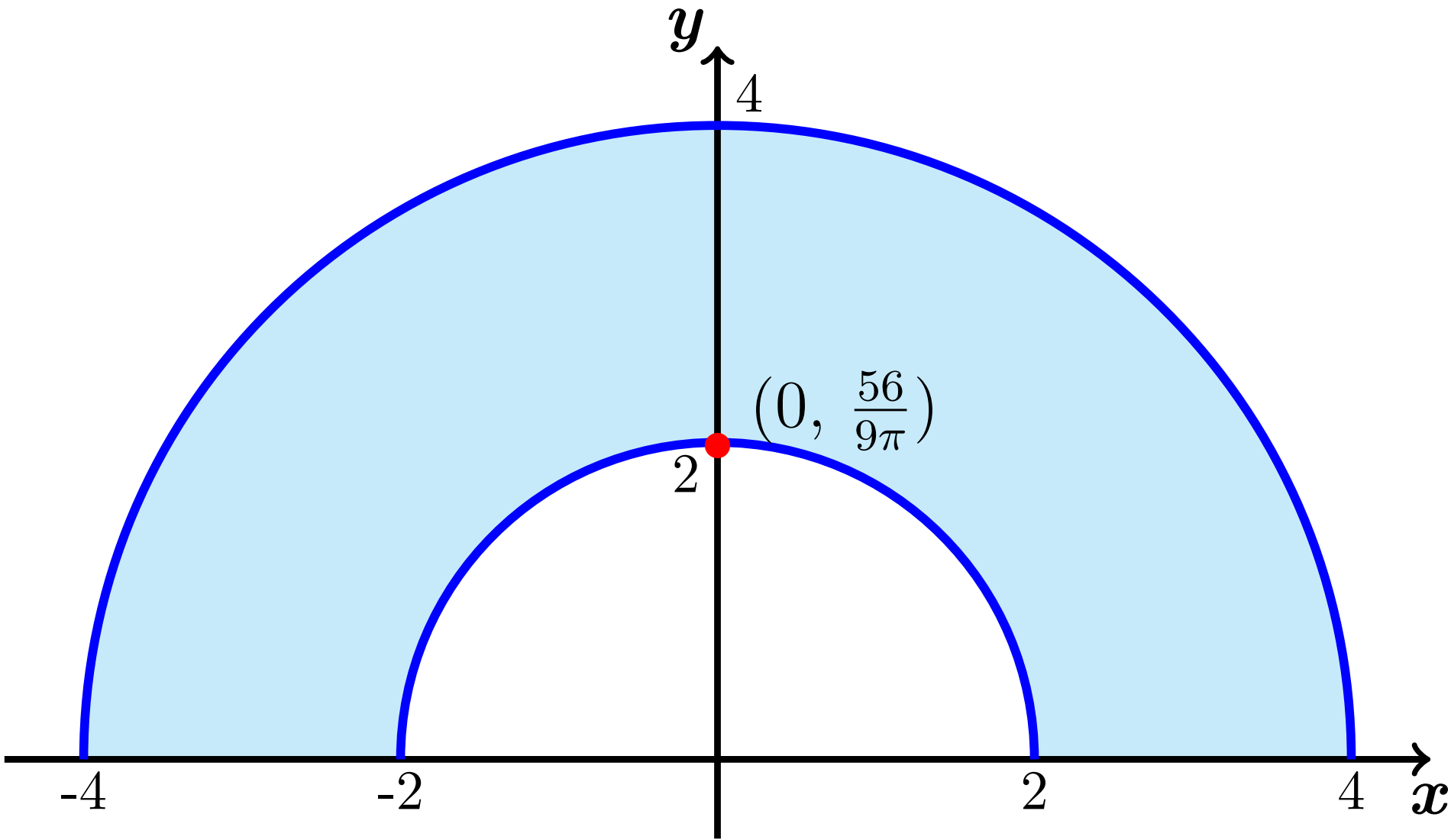

z
3
2
y
1
x

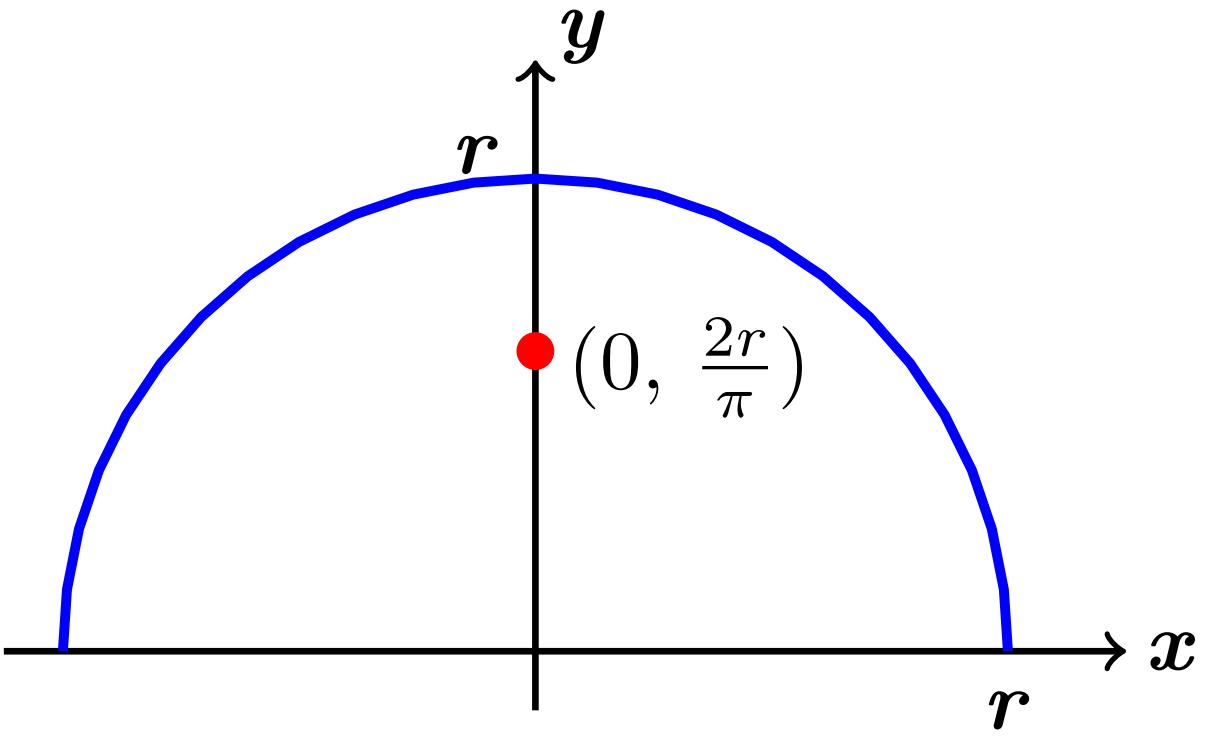

y
A
1
s
s
2
h
B
x
0
b/2
b

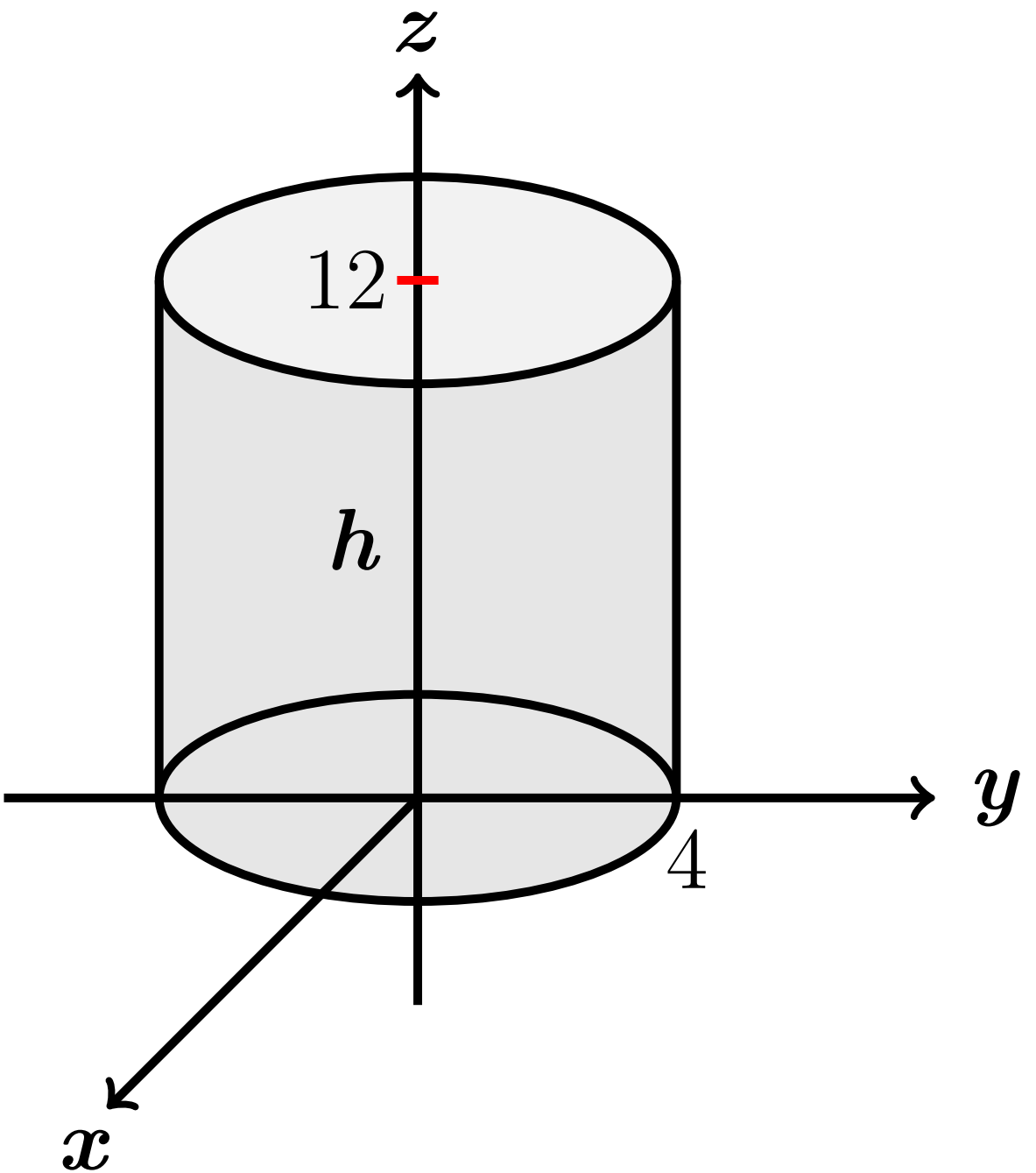

y
(s cos60°, s sin60°)
$\left(\frac{s}{2}, \frac{s\sqrt{3}}{2}\right)$
1
s
s
2
60°
0
x
s

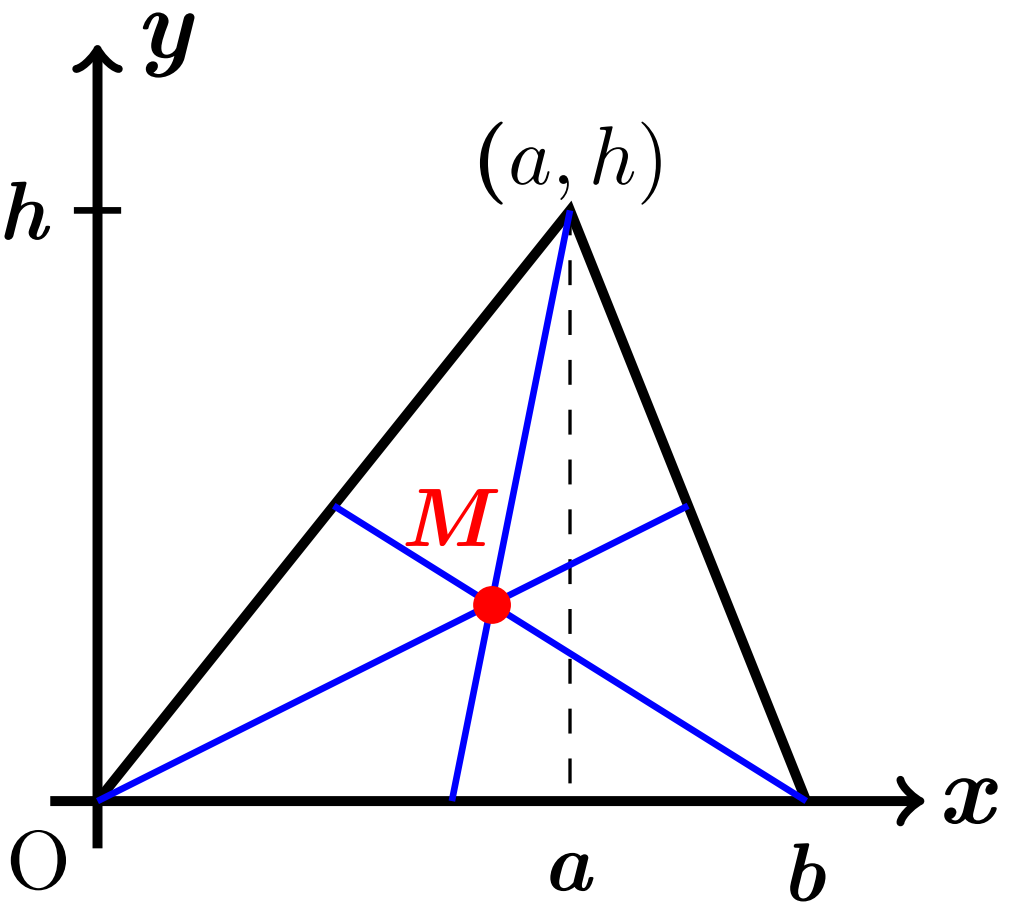

h
r
R
z

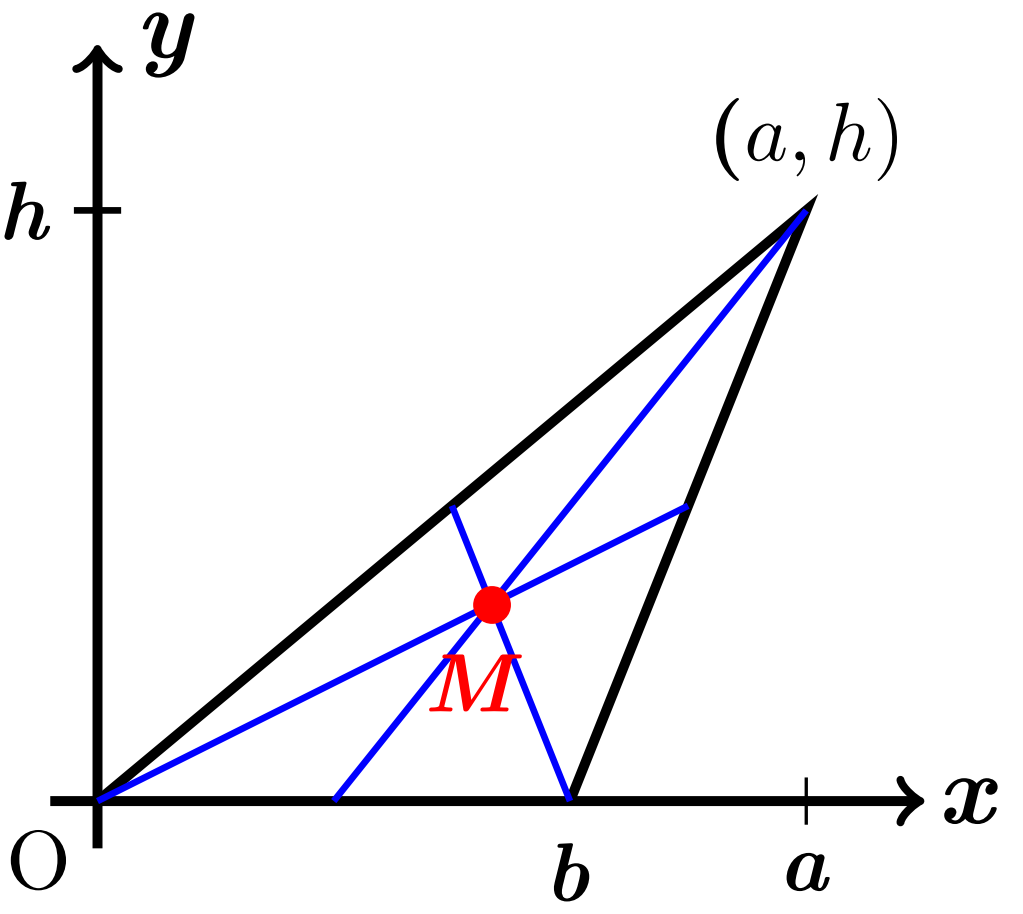

y
3
$(0, \frac{13}{3\pi})$
1
-3
-1
1
3
x

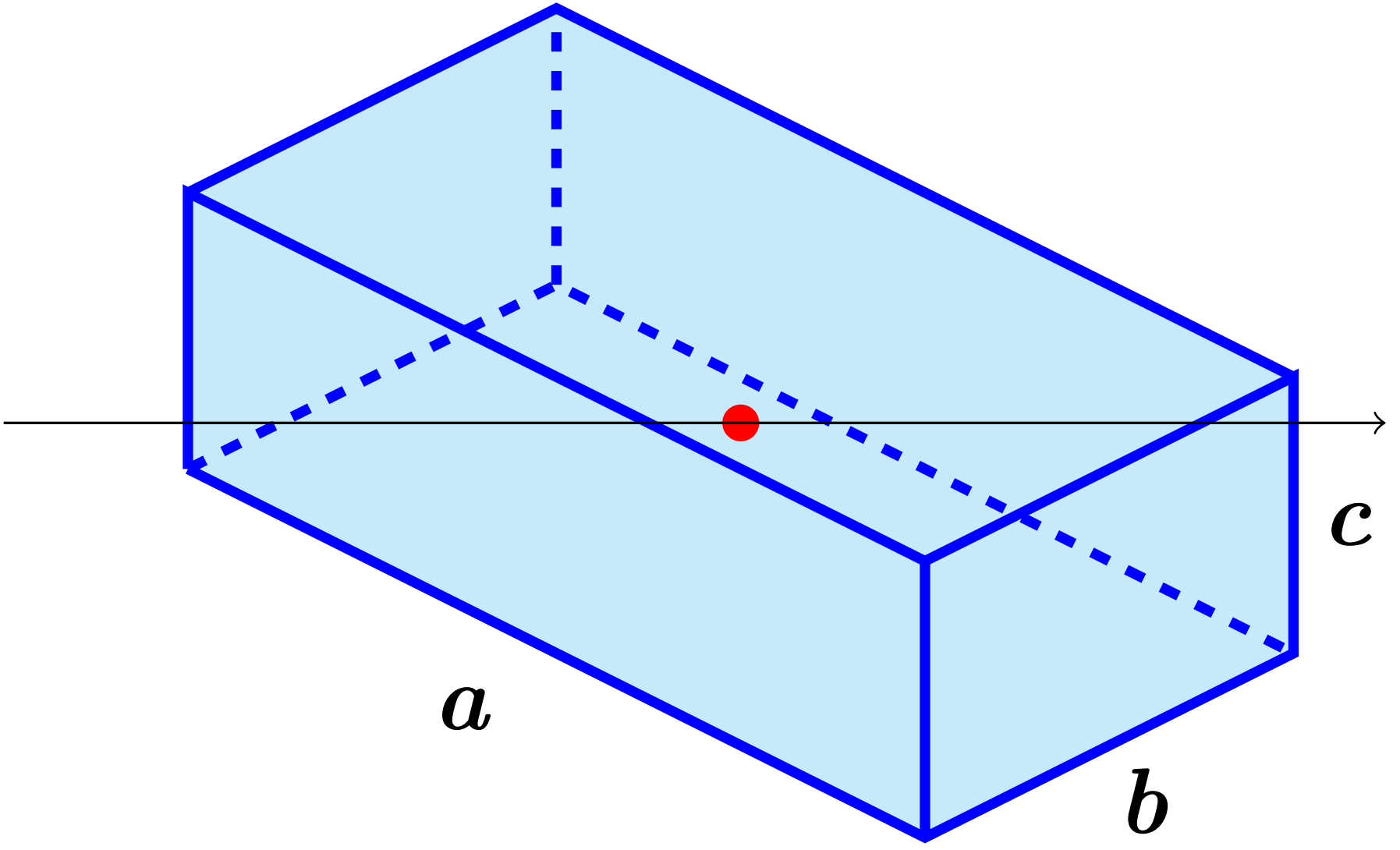

y
4
$(0, \frac{56}{9\pi})$
2
-4
-2
2
4
x

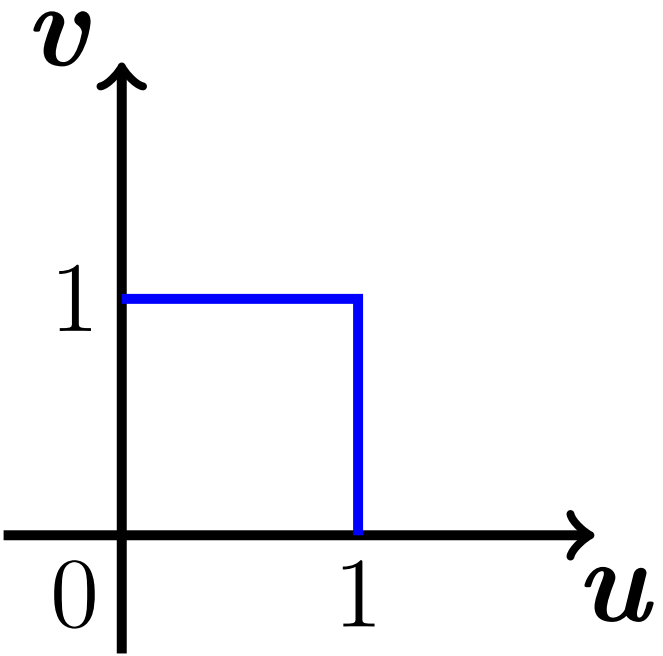

y
r
$(0, \frac{2r}{\pi})$
x
r

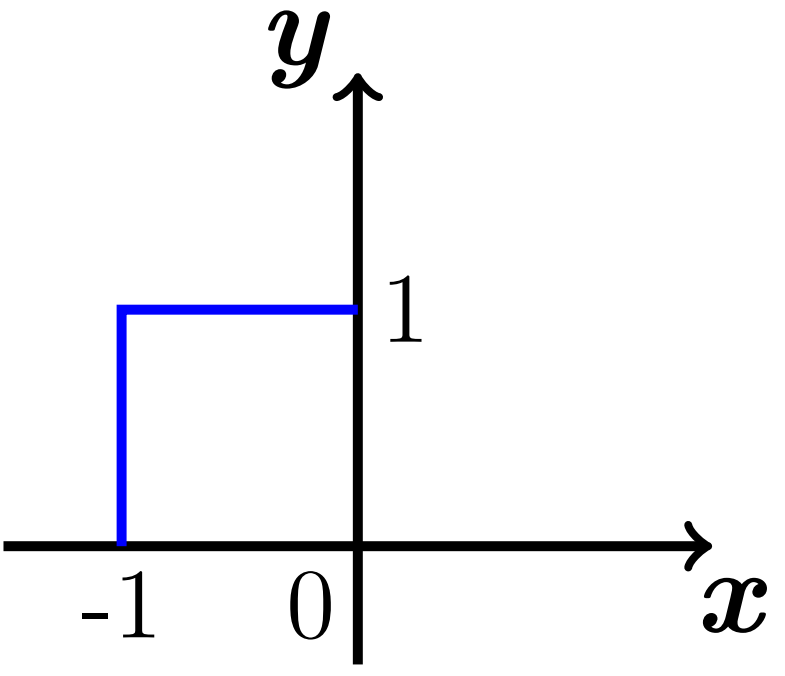

z
12
h
y
4
x

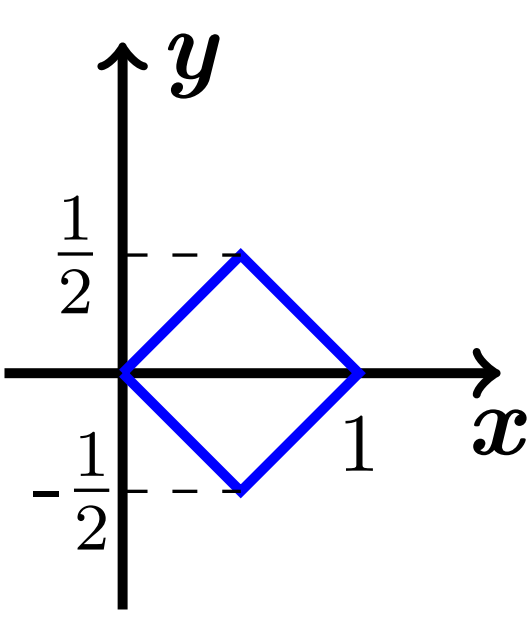

y
h
(a, h)
M
x
O
a
b

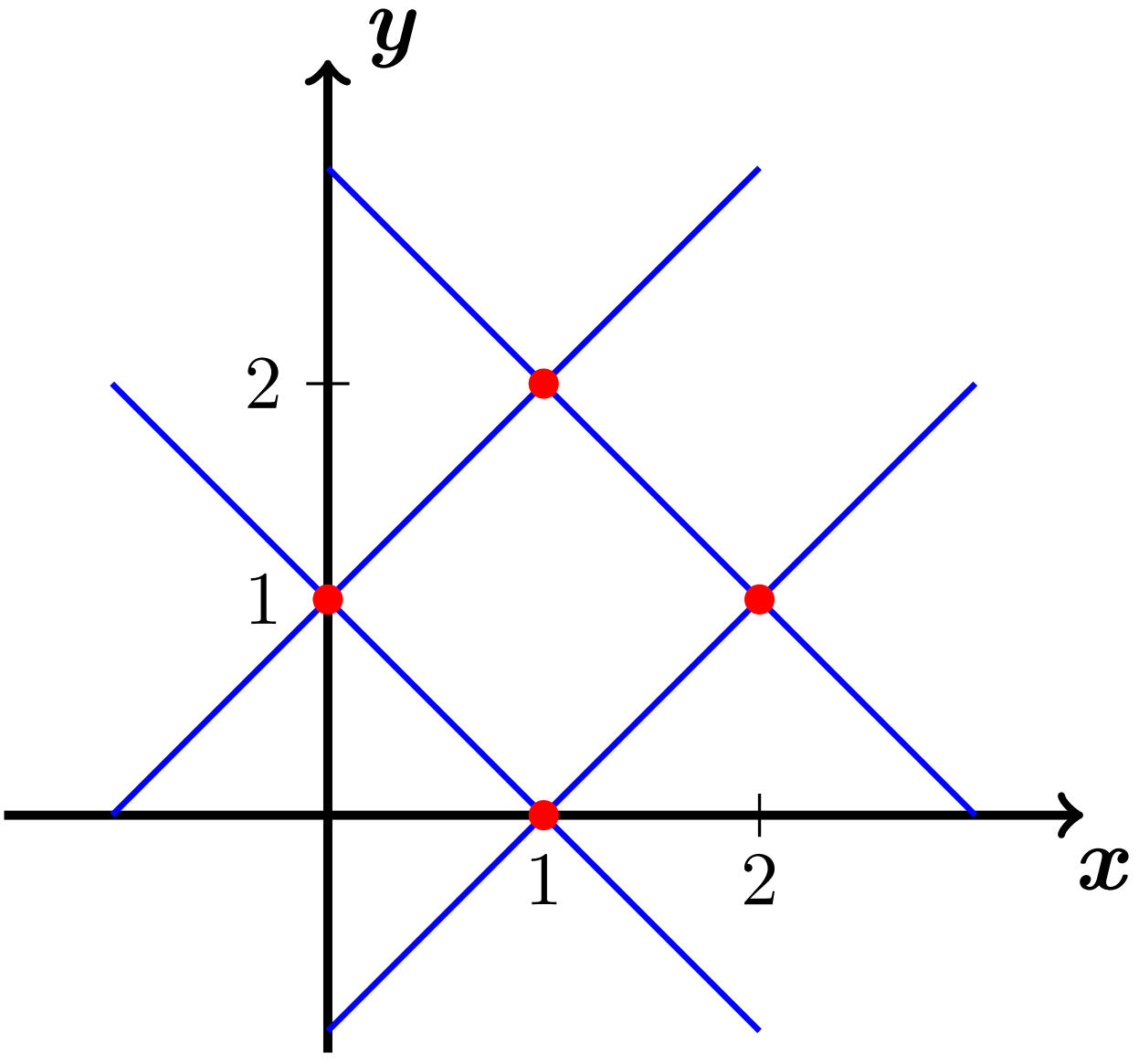

y
h
(a, h)
M
O
b
a
x

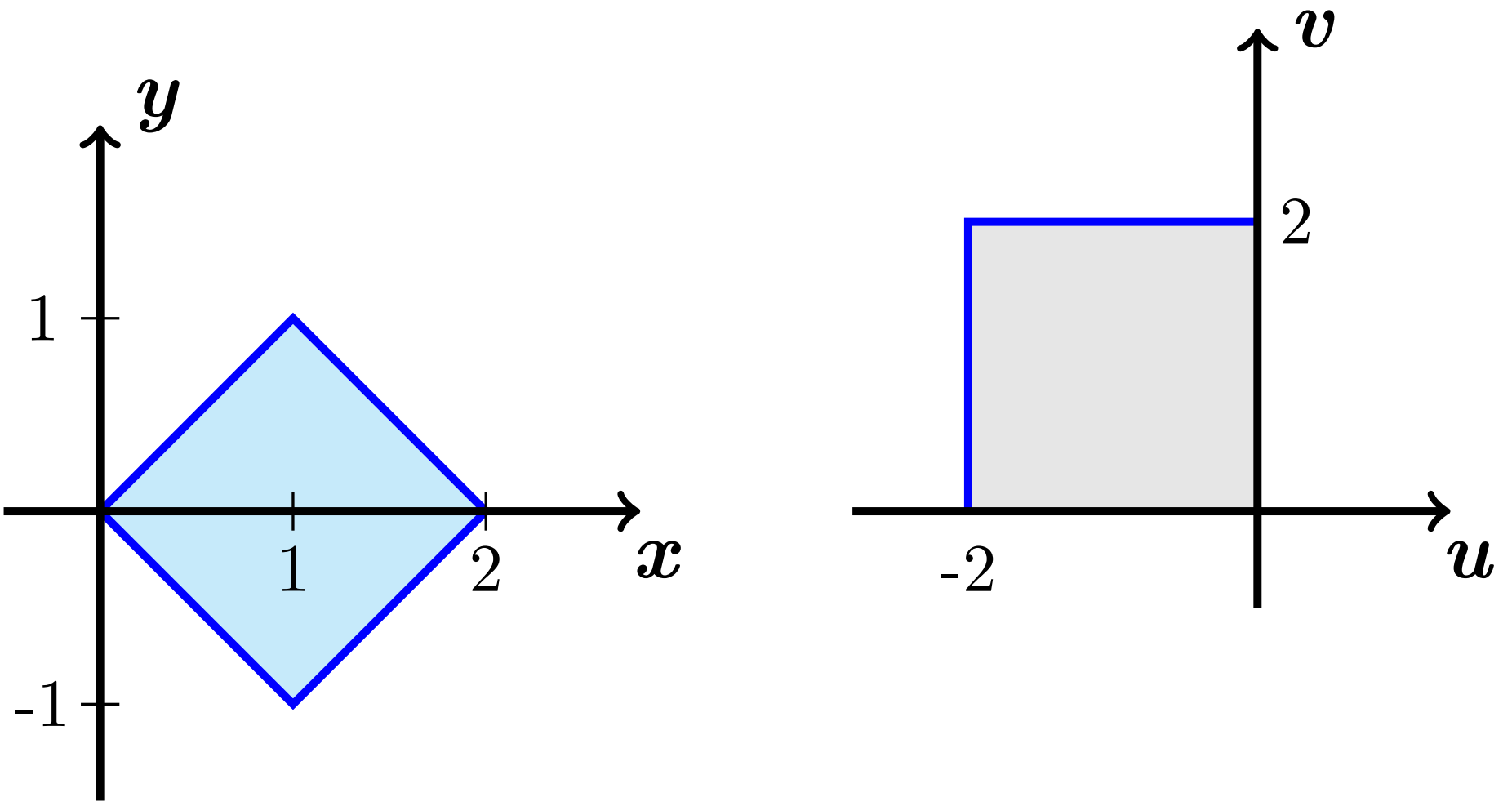

c
a
b

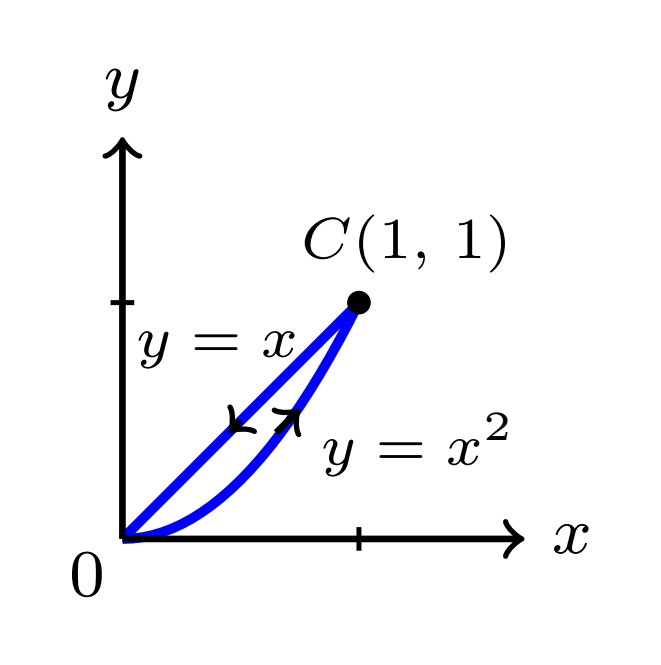

v
1
0
1
u

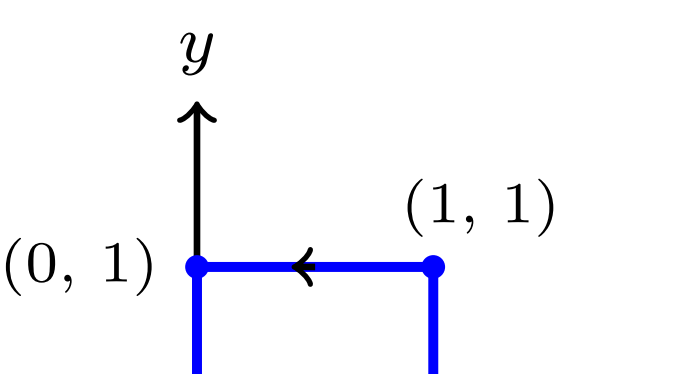

y
1
-1
0
x

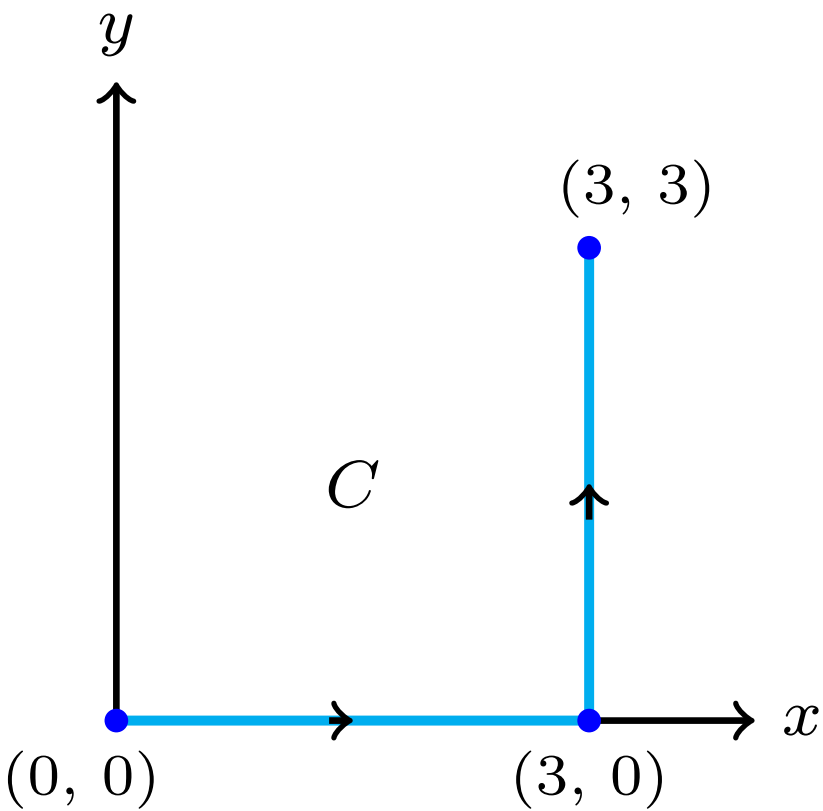

y
x
1/2
-1/2
1

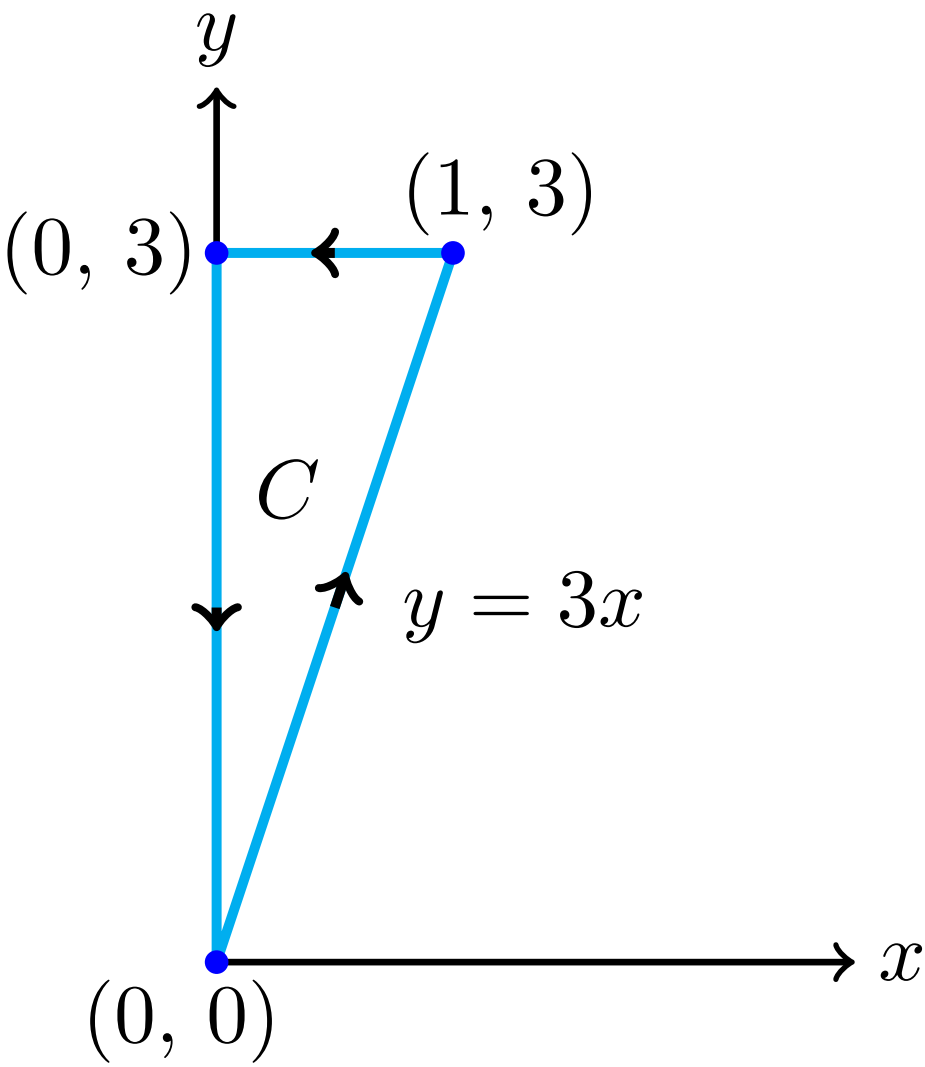

y
2
1
1
2
x

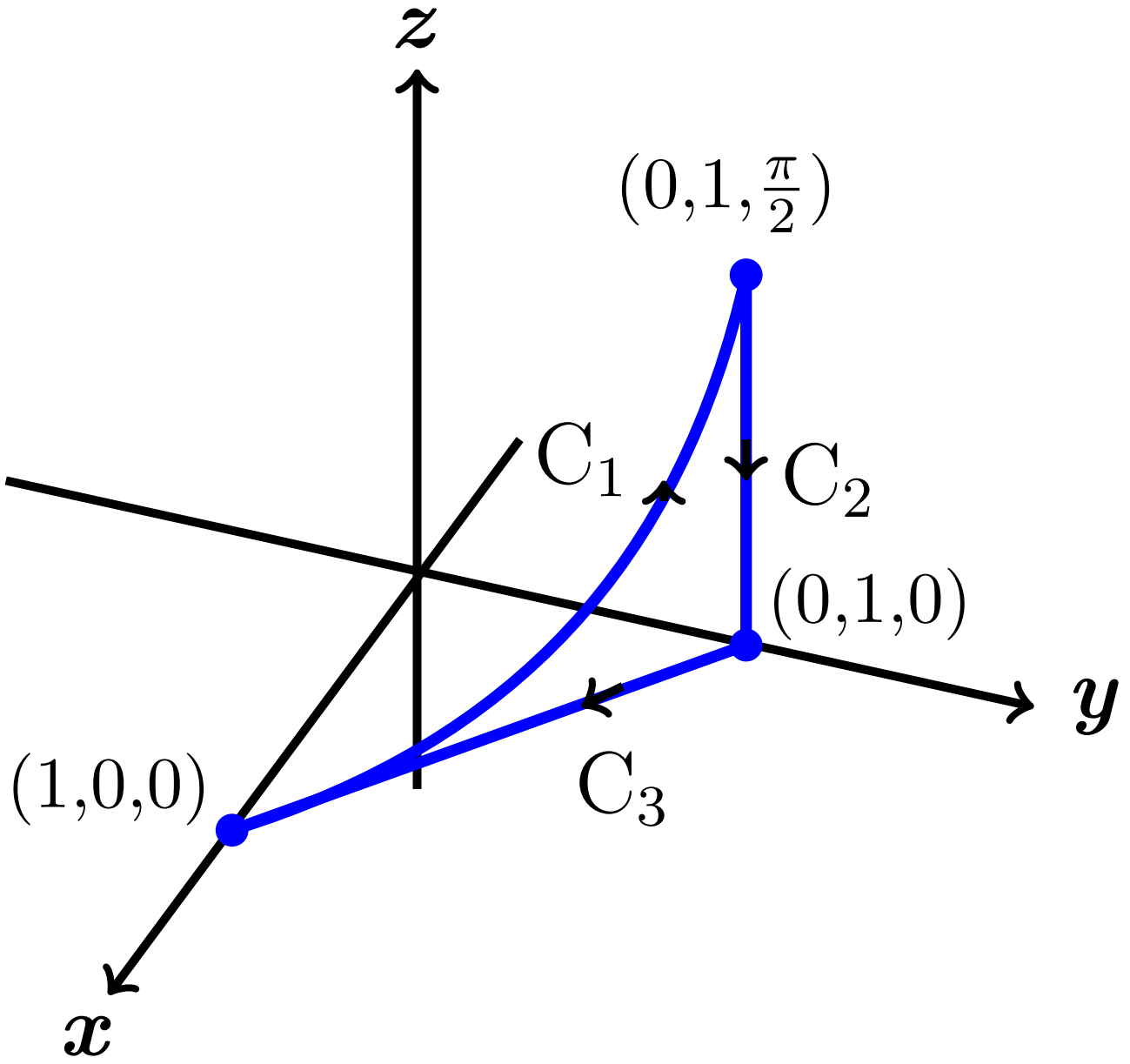

y
x
1
2
1
-1
v
u
2
-2

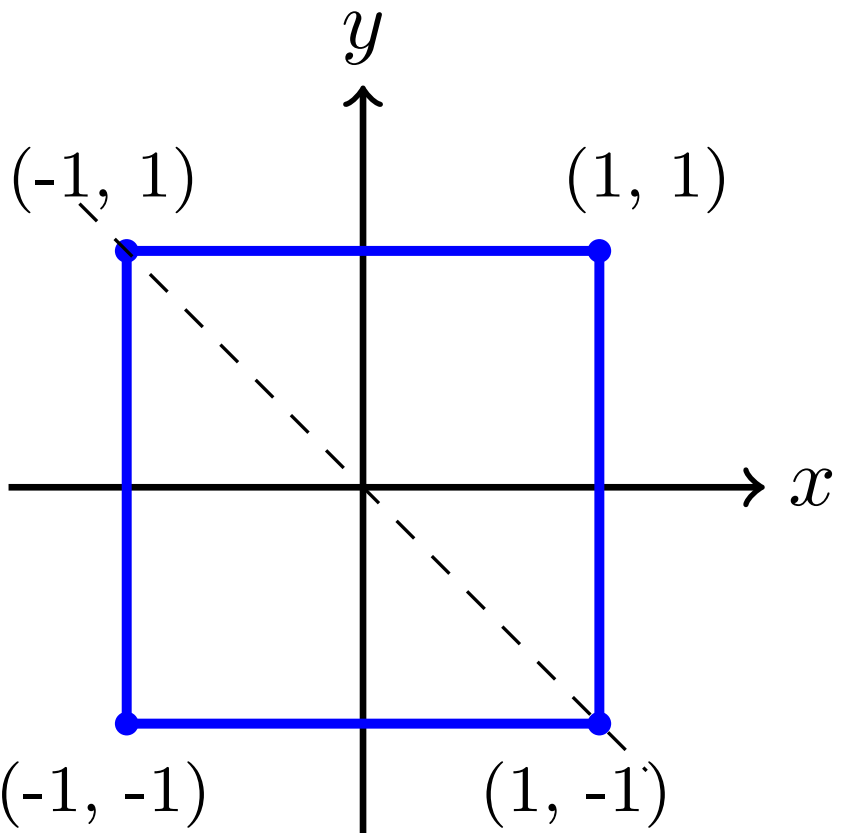

y
C(1, 1)
y = x
y = x^2
x
0

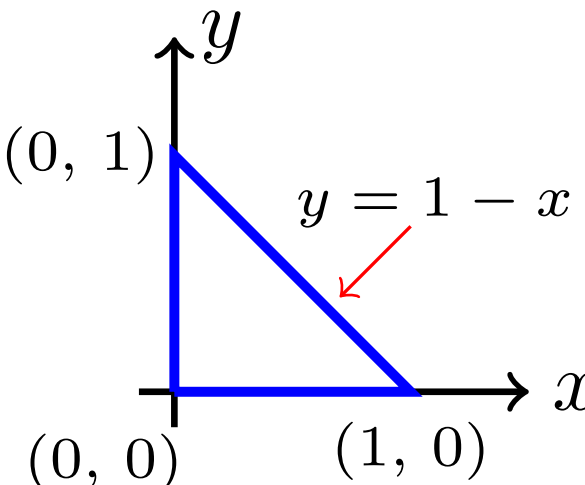

y
$(1,\ 1)$
$(0,\ 1)$
x
$(0,\ 0)$
$(1,\ 0)$

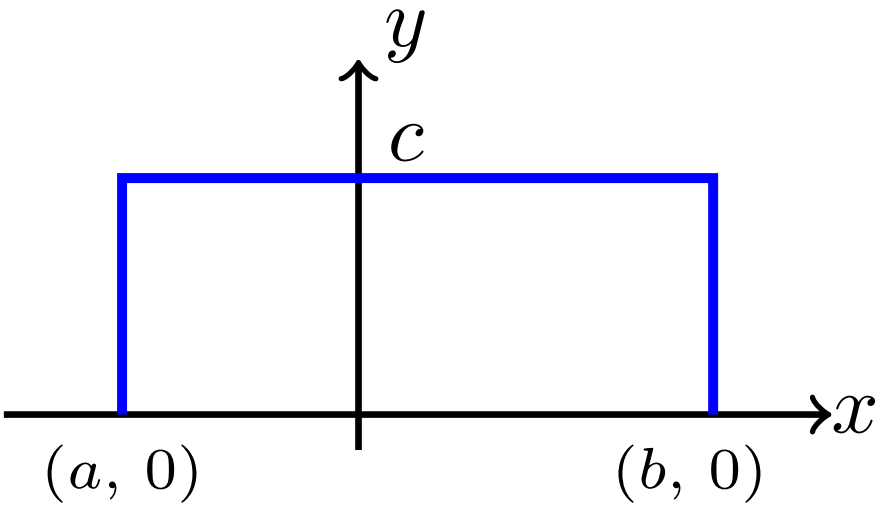

y
(3, 3)
C
x
(0, 0)
(3, 0)

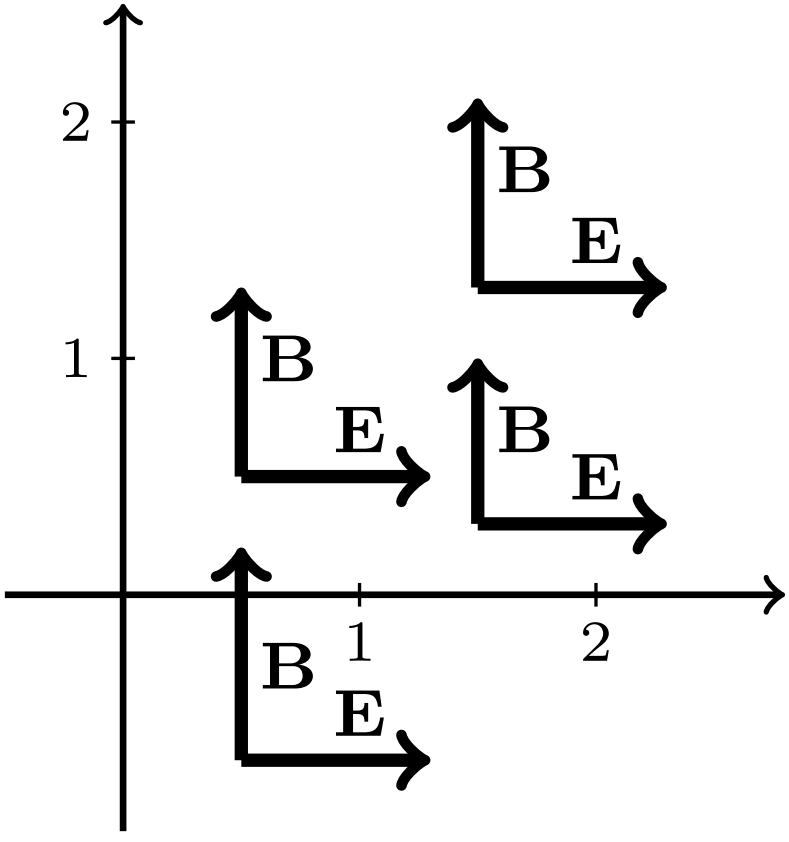

y
(1, 3)
(0, 3)
C
y = 3x
x
(0, 0)

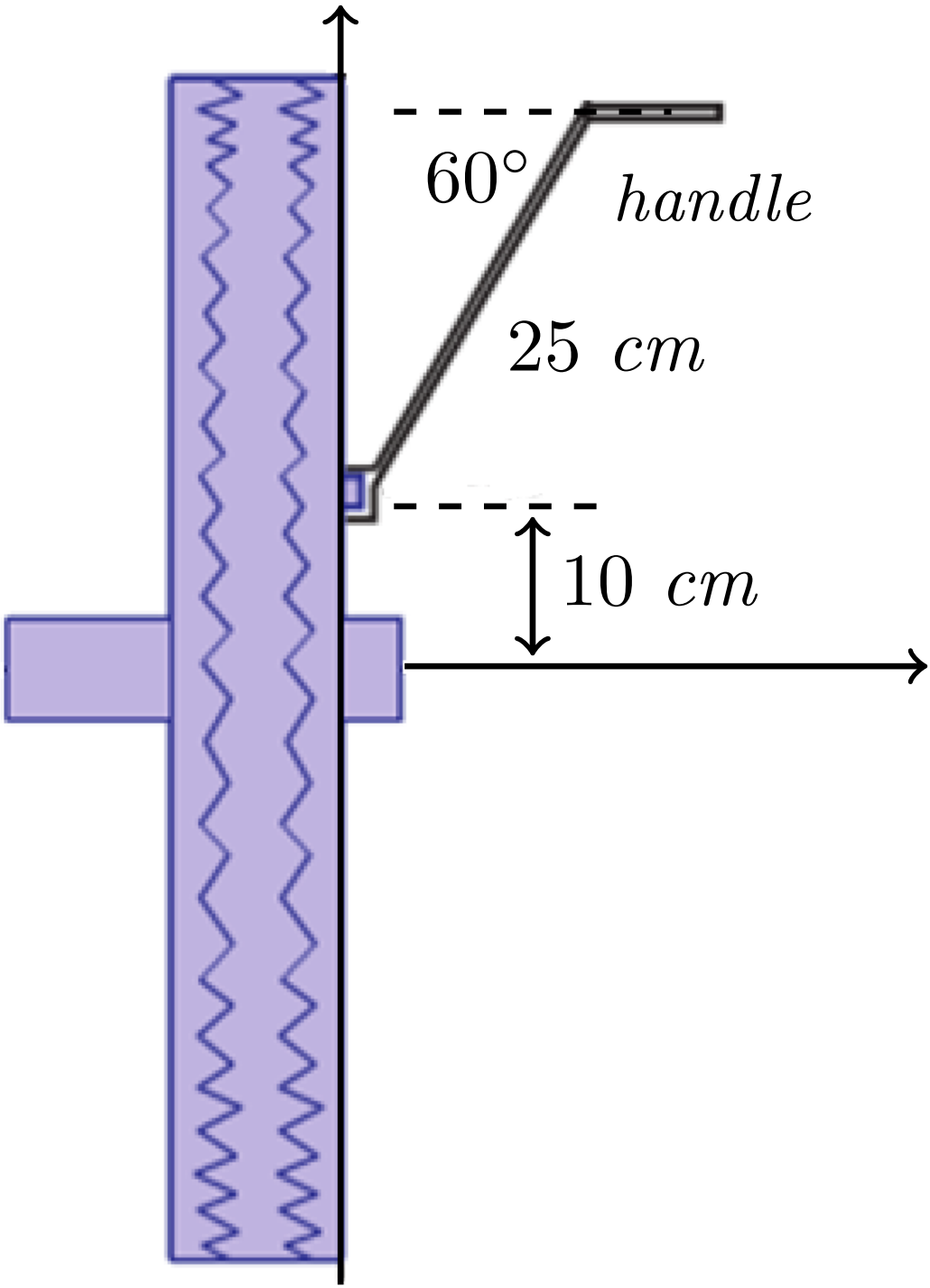

z
(0,1,π/2)
C1
C2
(0,1,0)
y
(1,0,0)
C3
x

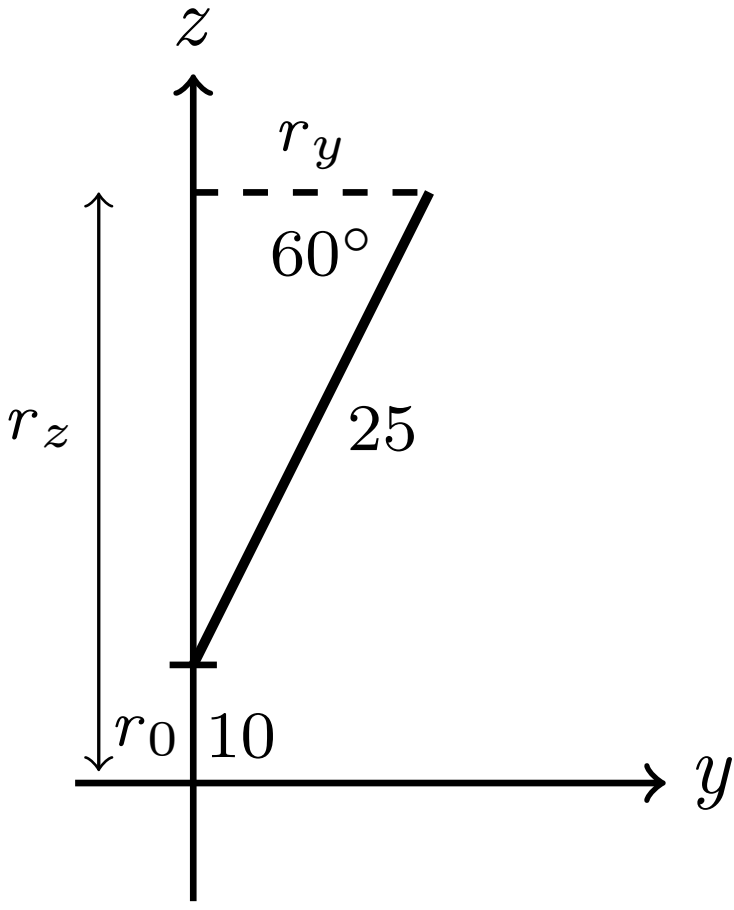

y
x
(-1, 1)
(1, 1)
(-1, -1)
(1, -1)

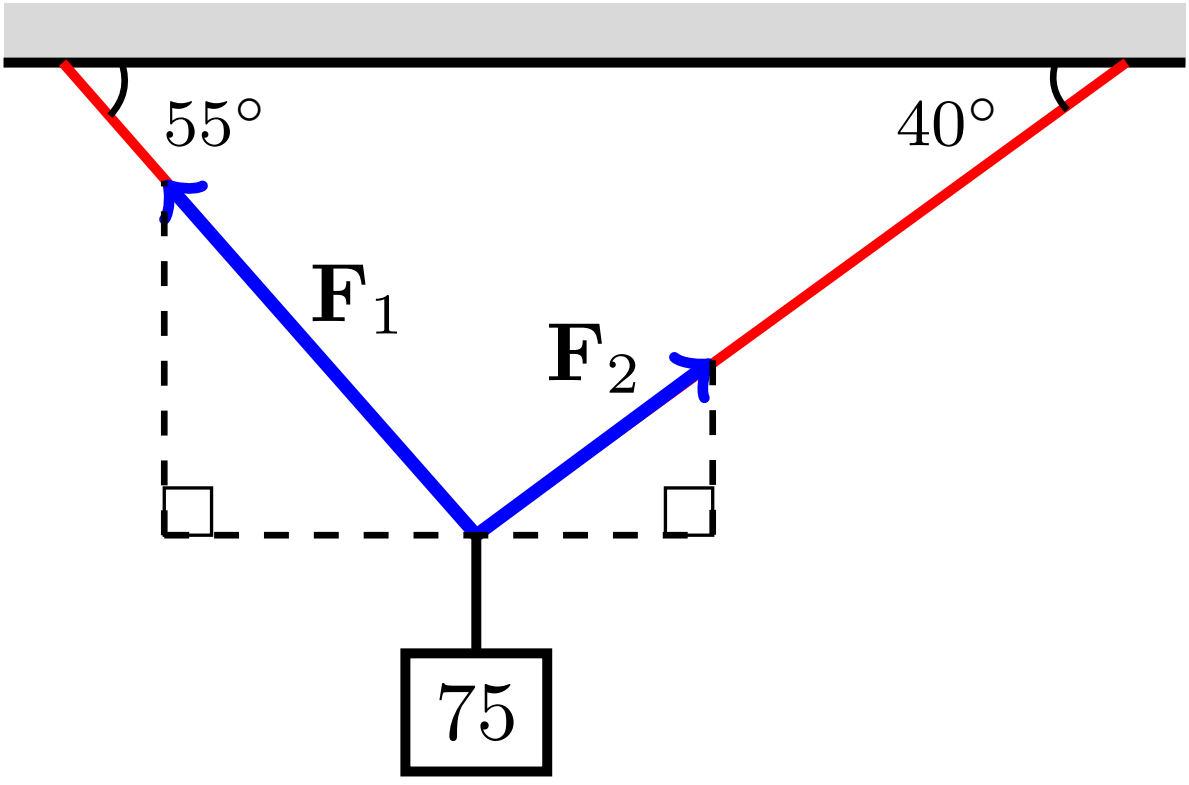

y
(0, 1)
y = 1 − x
x
(0, 0)
(1, 0)


y
c
x
(a, 0)
(b, 0)


2
1
B
E
B
E
B
E
B
E
1
2


60°
handle
25 cm
10 cm


z
r_y
60°
r_z
25
r_0
10
y


55°
40°
$\mathbf{F}_1$
$\mathbf{F}_2$
75