Exercise 1

Asset	vulnerability	likelihood	Impact rating/value
Switch L47	hardware failure	0.2	90
Switch L47	SNMP buffer overflow	0.1	90
Server WebSrv6	invalid Unicode values	0.1	100
MGMT45	unlogged misuse	0.1	5

Exercise 3

XYZ Software Company (Asset value> $1,200,000 in projected revenues)

Threat Category	Cost per Incident	Frequency of Occurrence	ARO
Programmer Mistakes	$ 5,000	1 per week	52
Loss of intellectual property	$ 75,000	1 per year	1
Software piracy	$ 500	1 per week	52
Theft of information (Hacker)	$ 2,500	1 per quarter	4
Theft of information (Employee)	$ 5,000	1 per 6 months	2
Web defacement	$ 500	1 per month	12
Theft of equipment	$ 5,000	1 per year	1
Viruses, worms, trojan horses	$ 1,500	1 per week	52
Denial-of-service attack	$ 2,500	1 per quarter	4
Earthquake	$ 250,000	1 per 20 years	0.05
Flood	$ 250,000	1 per 10 years	0.1
Fire	$ 500,000	1 per 10 years	0.1

Exercise 5

Threat Category	Cost per Incident	Frequency of Occurrence	Cost of Controls
	XYZ Software Company (Asset value> $1,200,000 in project		
Programmer Mistakes	$ 5,000	1 per month	$20,000
Loss of intellectual property	$ 75,000	1 per 2 years	$15,000
Software piracy	$ 500	1 per month	$30,000
Theft of information (Hacker)	$ 2,500	1 per 6 months	$15,000
Theft of information (Employee)	$ 5,000	1 per year	$15,000
Web defacement	$ 500	1 per quarter	$10,000
Theft of equipment	$ 5,000	1 per 2 year	$15,000
Viruses, worms, trojan horses	$ 1,500	1 per month	$15,000
Denial-of-service attack	$ 2,500	1 per 6 months	$10,000
Earthquake	$ 250,000	1 per 20 years	$5,000
Flood	$ 50,000	1 per 10 years	$10,000
Fire	$ 100,000	1 per 10 years	$10,000

control mitigation factor	uncertainty factor	product	
1	1.25	22.5	
1	1.25	11.25	
		33.75	max risk
0.25	1.2	3	
		3	max risk
1	1.1	0.55	
		0.55	max risk

ALE	
$	260,000
$	75,000
$	26,000
$	10,000
$	10,000
$	6,000
$	5,000
$	78,000
$	10,000
$	12,500
$	25,000
$	50,000

ed revenues)

Type of control	Post-Control ARO	Post-Control ALE	Worth it	CBA	
Training	12	$ 60,000	NO	$	180,000
Firewall/IDS	0.5	$ 37,500	NO	$	22,500
Firewall/IDS	12	$ 6,000	YES	$	(10,000)
Firewall/IDS	2	$ 5,000	YES	$	(10,000)
Physical Security	1	$ 5,000	YES	$	(10,000)
Firewall	4	$ 2,000	YES	$	(6,000)
Physical Security	0.5	$ 2,500	YES	$	(12,500)
Antivirus	12	$ 18,000	NO	$	45,000
Firewall	2	$ 5,000	YES	$	(5,000)
Insurance/Backup	0.05	$ 12,500	NO	$	(5,000)
Insurance/Backup	0.1	$ 5,000	YES	$	10,000
Insurance/Backup	0.1	$ 10,000	NO	$	30,000