47a				
HW: 9	9.1 Integrati	on by Parts: #14, 15, 16, 17, 29, 45	Name	
	# 14	Evaluate $\int x^2 \ln x dx$	# 15	Evaluate $\int x \csc^2(x) dx$
		J		3
	# 16	Evaluate $\int x \tan^{-1}(x) dx$	# 17	Evaluate $\int e^{-x} \sin(x) dx$
		J		•
]		If $f(x) = \sin \sqrt{x}$, find the area of the region
	# 29	Evaluate $\int e^{4x} \sin(5x) dx$	# 45	
		Evaluate $\int e^{-\sin(3x)ax}$		under the graph of f from $x = 0$ to $x = \pi^2$.

Answers

$$14)\frac{1}{9}x^3(3\ln x - 1) + C$$

$$15) - x \cot x + \ln\left|\sin x\right| + C$$

16)
$$\frac{1}{2}x^2 \tan^{-1} x - \frac{1}{2}x + \frac{1}{2}\tan^{-1} x + C$$

17)
$$-\frac{1}{2}e^{-x}(\sin x + \cos x) + C$$

$$29)\frac{1}{41}e^{4x}(4\sin 5x - 5\cos 5x) + C$$

45) 2π