

<b>Solution</b>	For firm A				
	Production loss	9,600	-	8,640	= 960
	Number of production runs		÷	4	
	Setup minutes per production run			240	
	Factory cost per minute		×	\$1.00	
	Costs		=	\$240	per production run

**Cost per pen**

	A	B			C	A+B+C
	Materials costs	Factory costs	Setup costs ÷	units	Unit Setup costs	Total
Pink	\$0.50	\$1.00	\$240	240	\$1.00	\$2.50
Green	\$0.50	\$1.00	\$240	720	\$0.33	\$1.83
Red	\$0.50	\$1.00	\$240	1,200	\$0.20	\$1.70
Black	\$0.50	\$1.00	\$240	6,480	\$0.04	\$1.54

Pink pens are far more expensive than the other pens.  
 Black pens are still more expensive than the cost for the other firm.

Maybe no setup costs should be allocated to Black pens

Production loss	=	960	
Number of production runs for nonstandard products	÷	3	
Setup minutes per production run		320	
	×	\$1.00	
Costs	=	\$320	per production run of nonstandard product

**Cost per pen**

	A	B			C	A+B+C
	Materials costs	Factory costs	Setup costs ÷	units	Unit Setup costs	Total
Pink	\$0.50	\$1.00	\$320	240	\$1.33	\$2.83
Green	\$0.50	\$1.00	\$320	720	\$0.44	\$1.94
Red	\$0.50	\$1.00	\$320	1,200	\$0.27	\$1.77
Black	\$0.50	\$1.00				\$1.50

Now black pens will be priced competitively while the other color pens have to be priced even higher.