II. Darin wants to continue his study of the proportion of 30-milligram parts found to be defective in chapter 12. This study found 5 of 50 parts were defective. This data and an additional 9 samples are summarized below. Construct a p chart for this data. Do not use the finite correction factor.

Defective 30-Milligram Parts										
Date	1/3	1/4	1/5	1/6	1/7	1/10	1/11	1/12	1/13	1/14
Sample #	1	2	3	4	5	6	7	8	9	10
Defects	5	4	6	3	5	4	7	4	3	7
Defects Proportion	.10	.08	.12	.06	.10	.08	.14	.08	.06	.14

$$\bar{p} = \frac{\text{total defects}}{\text{total sampled}}$$

$$\text{UCL and LCL} = \bar{p} \pm 3\sqrt{\frac{\bar{p}(1-\bar{p})}{n}}$$

$$\bar{p} = \frac{\text{total defects}}{\text{total sampled}} = \frac{48}{500} = .096$$

$$\text{UCL and LCL} = .096 \pm 3\sqrt{\frac{.096(1-.096)}{50}}$$

$$.096 \pm 3(.04166)$$

$$.096 \pm .125$$

$$-.029 \leftrightarrow +.221$$

$-.029$ is rounded to zero