

# Assignment

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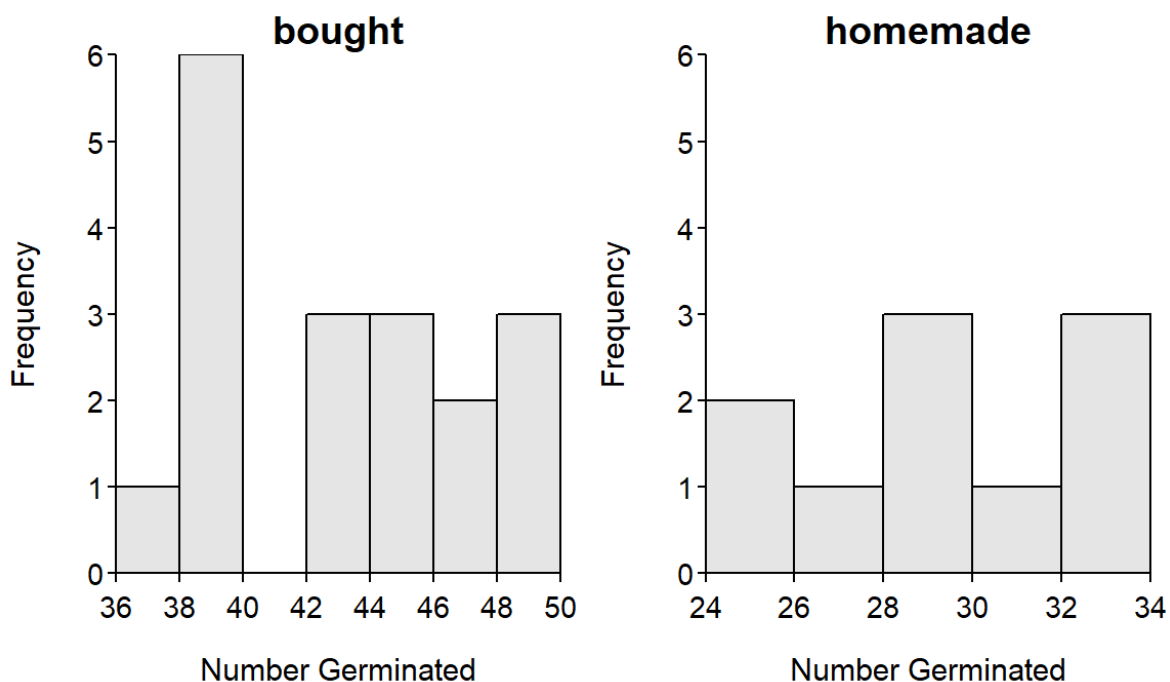
## Compost Type and Germination Rates

The owner of a greenhouse developed a methodology to produce sterilized compost for growing plants that was cheaper than the compost she could buy while also allowing her to reduce waste production. However, these benefits could be offset by losses related to poor plant germination and growth. Thus, the owner attempted to answer the question about germination success by planting 50 seeds of marigolds (*Tagetes* spp.) into individual containers that were filled with either the home-made sterilized compost or store-bought compost. The containers were randomly filled with one type of compost and were randomly placed into a large greenhouse where all environmental conditions were controlled. After five days, the number of (the 50) seeds in each container that had germinated was recorded. The results are shown below.

	compost	n	mean	sd	min	Q1	median	Q3	max
1	bought	18	42.67	4.33	36	39.00	42.5	45.50	50
2	homemade	10	28.90	3.21	24	27.25	28.0	31.75	33

Levene's Test for Homogeneity of Variance (center = median)

	Df	F value	Pr(>F)
group	1	1.4387	0.2412
	26		



Use this information to determine, at the 10% level, if the number of seeds that germinated was lower in the home-made compost.<sup>1</sup> *[NOTE: you are testing if the germination rate was lower in the home-made compost because that would suggest that it performs worse – fewer germinated plants – than the other compost and would increase costs to the greenhouse.]*