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| NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_ | **Stats**  |
| Normal Distribution – day 4 | **DATE: Tuesday, March 07, 2017** |

An average light bulb manufactured by the Acme Corporation lasts 300 days with a standard deviation of 50 days and it follows a normal distribution.

Fill in the graph:

Find:

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| --- | --- |
| P ( it lasts between 250 and 350 days) | P(It lasts longer than 300 days) |
| 95% of light bulbs last between how many days | P (it lasts less than 200 days): |

If the light bulb lasts less than ½ year (182 days) users can get a free replacement, what percent of sales, will be eligible for a free replacement?

What percent of bulbs will last more than a year (365 days)?

If a bulb lasts longer than 25% of other bulbs, how long did it last?

The longest 10% of bulbs will last how long?The average top for a coffee lid is normally distributed with mean of 12.45 cm and standard deviation of .15 cm

Find:

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| --- | --- |
| If the lid is smaller than 12.25, the lid will be hard to put on. What percent of lids is this? | If the lid is bigger than 12.75, the lid will fall off. What percent of lids might fall off? |
| A perfect lid is considered between 12.25 and 12.75, find what % of lids are in this range? | 90% of lids are smaller than what size? |
| The smallest 5% of lids are thrown away, what size is this? | ADVANCED: The middle 80% of lids are between what sizes? |