Empirical Rule Classwork

Please draw a rough diagram for each question and show all your work!

1. The lifespans of gorillas in a particular zoo are normally distributed. The average gorilla lives 20.8 years; the standard deviation is 3.1 years.

Use the empirical rule to estimate the probability of a gorilla living less than 23.9 years.

*50+34 = 84%*

1. The lifespans of meerkats in a particular zoo are normally distributed. The average meerkat lives 13.1 years; the standard deviation is 1.5 years.

Use the empirical rule to estimate the probability of a meerkat living longer than 14.6 years.

*100 – (50+34) = 16%*

1. The lifespans of lions in a particular zoo are normally distributed. The average lion lives 12.5years; the standard deviation is 2.4 years.

Use the empirical rule  to estimate the probability of a lion living less than 10.1 years.

*50 – 34 = 16%*

1. The lifespans of tigers in a particular zoo are normally distributed. The average tiger lives 22.4 years; the standard deviation is 2.7 years.

Use the empirical rule to estimate the probability of a tiger living between 27.8 and 30.5 years.

*50+(99.7/2) – (50+(95.45/2)) = 2.125%*

50% 47.725%

2.125%



24.3 27 29.7 22.4 25.1 27.8 30.5