 Sec 5.3 – Average Rate of Change Comparison

 Linear, Quadratic, or Exponential Functions Name:

1. Find the average rate of change from ***x = – 1*** to ***x = 2*** for each of the functions below.
2. $a\left(x\right)=2x+3$ b. $b\left(x\right)=x^{2}-1$ c. $c\left(x\right)=2^{x}+1$

d. Which function has the greatest average rate of change over the interval **[ – 1, 2]**?

1. Find the average rate of change on the interval **[ 2, 5]** for each of the functions below.
2. $a\left(x\right)=2x+1$ b. $b\left(x\right)=x^{2}+2$ c. $c\left(x\right)=2^{x}-1$

d. Which function has the greatest average rate of change over the interval ***x = 2*** to ***x = 5***?

1. In general as x→∞, which function eventually grows at the fastest rate?
2. $a\left(x\right)=2x$ b. $b\left(x\right)=x^{2}$ c. $c\left(x\right)=2^{x}$

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1. Find the average rate of change from ***x = – 1*** to ***x = 2*** for each of the continuous functions below based on the partial set of values provided.
2.  b. c.

d. Which function has the greatest average rate of change over the interval **[ – 1, 2]**?

1. Consider the table below that shows a partial set of values of two continuous functions. Based on any interval of ***x*** provided in the table which function always has a larger average rate of change?



1. Find the average rate of change from ***x = 1*** to ***x = 3*** for each of the functions graphed below.
2.  b. c.

d. Find an interval of x over which all three graphed functions above have the same average rate of change.

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