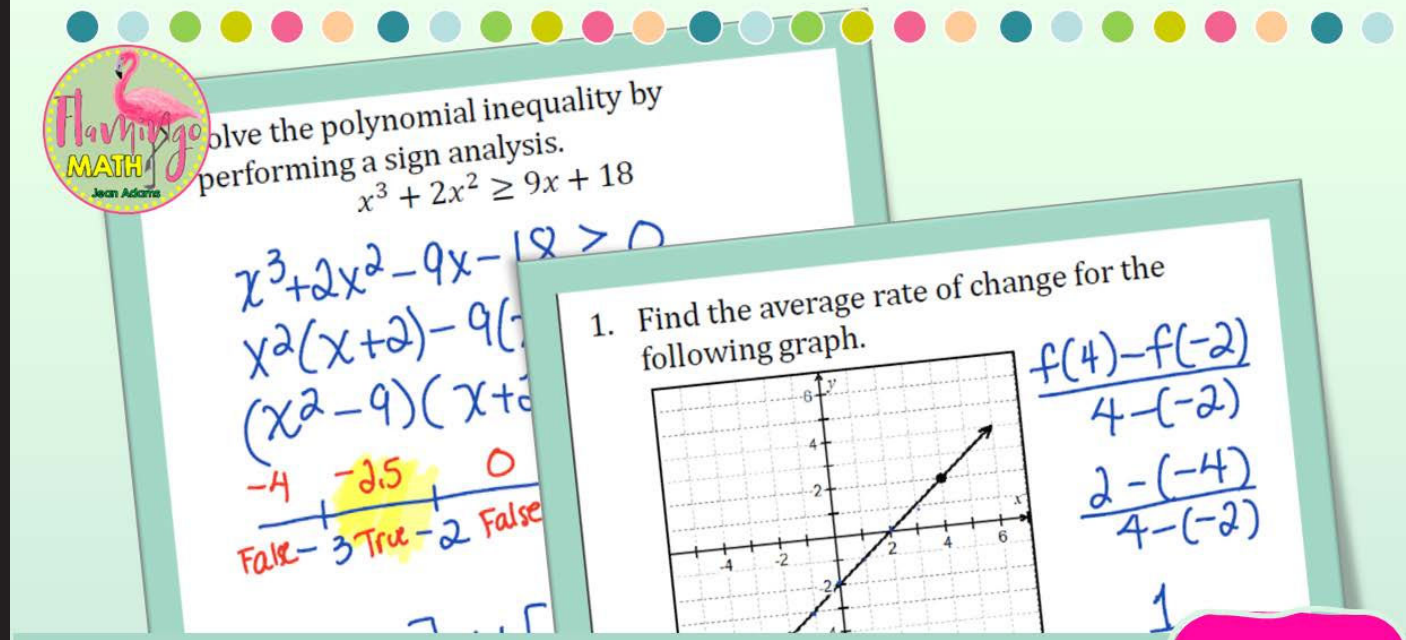
UNIT 1 Daily Quiz Bundle

24 pages of content specific lesson quizzes for AP PreCalculus

Flamingo Math

AP® Precalculus

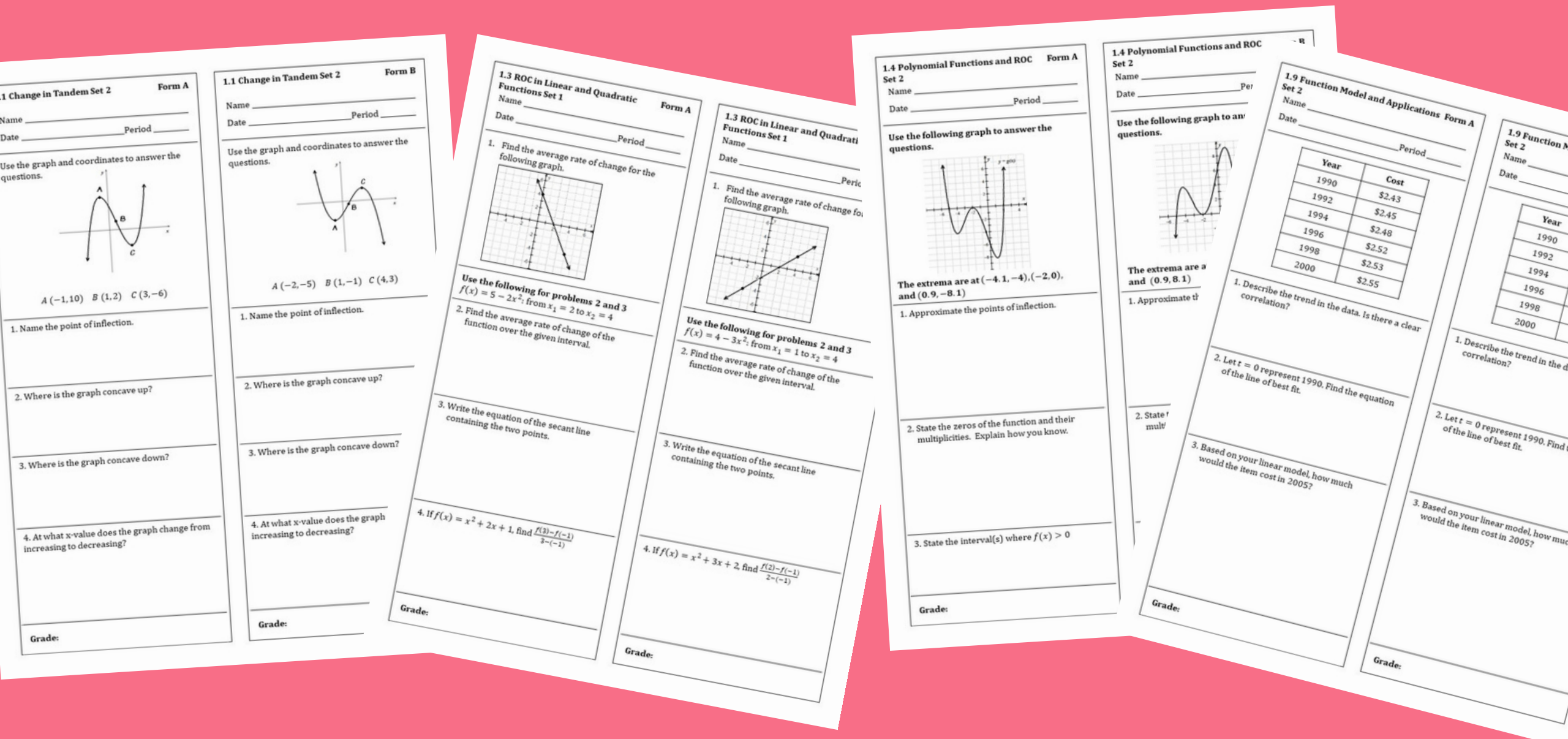
Polynomial and Rational Functions



Daily Quizzes 1

Completely Editable

Two different forms for each set



1.1 Change in Tandem Set 2 Form A

Name _____

Date _____ Period _____

Use the graph and coordinates to answer the questions.

$A(-1,10)$ $B(1,2)$ $C(3,-6)$

1. Name the point of inflection.
2. Where is the graph concave up?
3. Where is the graph concave down?
4. At what x-value does the graph change from increasing to decreasing?

Grade:

1.1 Change in Tandem Set 2 Form B

Name _____

Date _____ Period _____

Use the graph and coordinates to answer the questions.

$A(-2,-5)$ $B(1,-1)$ $C(4,3)$

1. Name the point of inflection.
2. Where is the graph concave up?
3. Where is the graph concave down?
4. At what x-value does the graph increasing to decreasing?

Grade:

1.3 ROC in Linear and Quadratic Functions Set 1 Form A

Name _____

Date _____ Period _____

1. Find the average rate of change for the following graph.

Use the following for problems 2 and 3 $f(x) = 5 - 2x^2$; from $x_1 = 2$ to $x_2 = 4$

2. Find the average rate of change of the function over the given interval.
3. Write the equation of the secant line containing the two points.
4. If $f(x) = x^2 + 2x + 1$, find $\frac{f(3)-f(-1)}{3-(-1)}$

Grade:

1.3 ROC in Linear and Quadrati Functions Set 1

Name _____

Date _____ Perio

1. Find the average rate of change fo following graph.

Use the following for problems 2 and 3 $f(x) = 4 - 3x^2$; from $x_1 = 1$ to $x_2 = 4$

2. Find the average rate of change of the function over the given interval.
3. Write the equation of the secant line containing the two points.
4. If $f(x) = x^2 + 3x + 2$, find $\frac{f(2)-f(-1)}{2-(-1)}$

Grade:

1.4 Polynomial Functions and ROC Set 2 Form A

Name _____

Date _____ Period _____

Use the following graph to answer the questions.

The extrema are at $(-4.1,-4)$, $(-2,0)$, and $(0.9,-8.1)$

1. Approximate the points of inflection.
2. State the zeros of the function and their multiplicities. Explain how you know.
3. State the interval(s) where $f(x) > 0$

Grade:

1.4 Polynomial Functions and ROC Set 2

Name _____

Date _____ Per

Use the following graph to an questions.

The extrema are a and $(0.9,8.1)$

1. Approximate th
2. State mult

1.9 Function Model and Applications Set 2 Form A

Name _____

Date _____ Period _____

Year	Cost
1990	$2.43
1992	$2.45
1994	$2.48
1996	$2.52
1998	$2.53
2000	$2.55

1. Describe the trend in the data. Is there a clear correlation?
2. Let $t = 0$ represent 1990. Find the equation of the line of best fit.
3. Based on your linear model, how much would the item cost in 2005?

Grade:

1.9 Function M Set 2

Name _____

Date _____

Year
1990
1992
1994
1996
1998
2000

1. Describe the trend in the d correlation?
2. Let $t = 0$ represent 1990. Find of the line of best fit.
3. Based on your linear model, how muc would the item cost in 2005?

Grade:

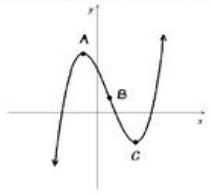
Full Solutions

1.1 Change in Tandem Set 2 **Form A**

Name _____

Date _____ Period _____

Use the graph and coordinates to answer the questions.



$A(-1, 10)$ $B(1, 2)$ $C(3, -6)$

1. Name the point of inflection.

$\left(\frac{-1+3}{2}, \frac{10-6}{2}\right) = (1, 2)$ B

2. Where is the graph concave up?

$(1, \infty)$

3. Where is the graph concave down?

$(-\infty, 1)$

4. At what x-value does the graph change from increasing to decreasing?

$x = -1$

Grade:

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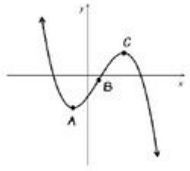
1.1 Change in Tandem Set 2 **Form B**

Name _____

Date _____ Period _____

Use the graph and coordinates to answer the questions.



$A(-2, -5)$ $B(1, -1)$ $C(4, 3)$

1. Name the point of inflection.

$\left(\frac{-2+4}{2}, \frac{-5+3}{2}\right) = (1, -1)$ B

2. Where is the graph concave up?

$(-\infty, 1)$

3. Where is the graph concave down?

$(1, \infty)$

4. At what x-value does the graph change from increasing to decreasing?

$x = 4$

Grade:

1.4 Polynomial Functions and ROC Set 1 **Form A**

Name _____

Date _____ Period _____

Use the following function to answer the questions. Round to the nearest hundredth, if necessary.

$f(x) = -0.25x^4 + 0.5x^3 + 1.5x^2$

1. Find the real zeros.

$x = 0, 3.645, -1.645$

$\{0, 3.65, -1.65\}$

2. State the value of x where the extrema occur and label as local or global and maximum or minimum.

$x \approx -1.137$ local max

$x = 0$ local min

$x \approx 2.637$ global max

3. Identify each extreme value of the function.

local max ≈ 0.786

local min $= 0$

global max ≈ 7.510

4. On what interval(s) is the graph increasing?

$(-\infty, -1.137]$

$[0, 2.637]$

Grade:

1.4 Polynomial Functions and ROC Set 1 **Form B**

Name _____

Date _____ Period _____

Use the following function to answer the questions. Round to the nearest hundredth, if necessary.

$f(x) = 0.5x^4 - 0.75x^3 - 2.5x^2$

1. Find the real zeros.

$x = 0, 3.108, -1.608$

$\{0, 3.11, -1.61\}$

2. State the value of x where the extrema occur and label as local or global and maximum or minimum.

$x \approx -1.116$ local min

$x = 0$ local max

$x \approx 2.241$ global min

3. Identify each extreme value of the function.

local min ≈ -1.296

local max $= 0$

global min ≈ -8.385

4. On what interval(s) is the graph increasing?

$[-1.116, 0]$

$[2.241, \infty)$

Grade:

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1.2 Rates of Change Set 2 **Form A**

Name _____

Date _____ Period _____

Suppose an object is launched upward with an initial velocity of 52 feet per second from a height of 90 feet. The height of the object t seconds after it is launched is given by the function $h(t) = -16t^2 + 52t + 90$.

1. Find the average velocity in the first two seconds after the object is launched.

Avg. velocity $= \frac{h(2) - h(0)}{2 - 0}$

$= \frac{130 - 90}{2 - 0} = \frac{40}{2}$

Avg. velocity = 20 ft/sec.

2. Find the average velocity from $t = 3$ to $t = 4$ seconds.

Avg. velocity $= \frac{h(4) - h(3)}{4 - 3}$

$= \frac{42 - 102}{4 - 3} = \frac{-60}{1}$

Avg. velocity = -60 ft/sec

3. Find the average velocity from $t = 1.6$ to $t = 4.5$ seconds

Avg. velocity $= \frac{h(4.5) - h(1.6)}{4.5 - 1.6}$

$= \frac{0 - 132.24}{4.5 - 1.6} = -45.6$

Avg. velocity = -45.6 ft/sec

Grade:

1.2 Rates of Change Set 2 **Form B**

Name _____

Date _____ Period _____

Suppose an object is launched upward with an initial velocity of 50 feet per second from a height of 95 feet. The height of the object t seconds after it is launched is given by the function $h(t) = -16t^2 + 50t + 95$

1. Find the average velocity in the first two seconds after the object is launched.

Avg. velocity $= \frac{h(2) - h(0)}{2 - 0}$

$= \frac{131 - 95}{2 - 0} = \frac{36}{2}$

Avg. velocity = 18 ft/sec.

2. Find the average velocity from $t = 3$ to $t = 4$ seconds.

Avg. velocity $= \frac{h(4) - h(3)}{4 - 3}$

$= \frac{39 - 101}{4 - 3} = \frac{-62}{1}$

Avg. velocity = -62 ft/sec

3. Find the average velocity from $t = 1.6$ to $t = 4.4$ seconds

Avg velocity $= \frac{h(4.4) - h(1.6)}{4.4 - 1.6}$

$= \frac{5.24 - 134.04}{4.4 - 1.6} = -46$

Avg. velocity = -46 ft/sec.

Grade:

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