Secondary Math 2 Final Review Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_

State the relationship, then solve for x.



|  |  |
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| 1. L
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Find the measure of the indicated arc or angle.

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| 1.
 | 1.
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Find the missing length given that the triangles are similar.

1. 

Determine the missing side or angle. Round to the nearest hundredth.

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| 1.
 | 1.
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1. A kite with a string 150ft long makes an angle of 45° with the ground. Draw a picture to represent the situation, then determine the height of the kite in the air.

Solve the quadratics below. SHOW ALL OF YOUR WORK. Leave as exact answers.

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| 1. $0=x^{2}+15x+56$
 | 1. $3x^{2}-3x=36$
 |
| 1. $x^{2}-20x+58=0$
 | 1. $3x^{2}-2x=120$
 |
| 1. $x^{2}-16=6x$
 | 1. $9x^{2}-9x+7=0$
 |

Graph the quadratic equations below. Then identify the key features.

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| 1.
 |  Vertex:x-int: y-int:Domain:Range:Increasing:Decreasing: |

Simplify the given expressions. Your answer should contain only positive exponents.

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| 1. $m^{-1}n^{-4}∙(-n^{3})^{-5}$
 | 1. $(x^{-4}y^{4})^{0}∙x^{4}y^{0}$
 |

Given $f\left(x\right)=5x^{2}-1$, find the average rate of change on the following intervals.

|  |  |
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| 1. $[0,3]$
 | 1. $[-3,1]$
 |
| 1. Write the equation of a parabola with vertex at (3,-2) through the point (-1, 11)
 | 1. Write the equation of a parabola with x-intercepts at (-2,0) and (0,0) through the point (3,-12)
 |

1. Identify if the table below represents a linear, quadratic, or exponential function.



1. Find the arc length and sector area of the specified section below. Give both exact and approximate answers.



Find the missing angle.

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| 1. K
 | 1.
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Solve the following systems.



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Use the two-way table to find the specified probabilities. Let I represent playing an instrument and S represent playing a sport.



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| 1. $P(S∩I)$
 | 1. $P(I^{C}∩S)$
 |
| 1. $P(S∪I)$
 | 1. $P(S|I)$
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|  |  |