**ALGEBRA 1: CHAPTER 8-5 to 8-9 REVIEW**

**ANSWER SHEET**

Student ………………………………………………… Date ………………………….

Period …………

**Your answers to Part I should be recorded on this answer sheet.**

**Part I**

**Answer all questions in this part.**

1 ……… 6 ………

2 ……… 7 ………

3……… 8 ………

4……… 9 ………

5……… 10 ……...

**Your answers for Part II should be written in the test booklet.**

**The declaration below should be signed when you have completed the examination.**

**Academic honesty and integrity are basic to an effective learning community. All students are expected to be honest and display a high standard of integrity in the preparation and presentation of work in all classes. I understand the importance of academic integrity at Westlake High School, and I vow to be honest and honorable in all of my dealings with fellow students, faculty, and staff. I understand that each time I sign my name to a school document, I am reaffirming this pledge. [Adapted from Westlake High School Honor Code]**

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 **Signature**

**Part I**

**On the separate answer document, please print the capital letter that best completes each statement or answers each question. *(2 points each, no partial credit)***

1. Factor 88$a^{2}b^{2}$ + 24$a^{2}$*b* – 32*a*$b^{2}$ completely.

 **A** 8$a^{2}b^{2}$ (11 + 3*b* – 4*a*) **C** 8*ab*(11*ab* + 3*a* – 4*b*)

 **B** 2*ab*(44*ab* + 12*a* – 16*b*) **D** (11$a^{2}$ + 8*b*)(8*a* – 4$b^{2}$)

2. Solve. (3*m* – 2)(9*m* + 5) = 0

 **F** $\left\{\frac{3}{2} , \frac{9}{5}\right\}$ **H** $\left\{-\frac{9}{5} , \frac{3}{2}\right\}$

 **G** $\left\{-\frac{5}{9} , \frac{2}{3}\right\}$ **J** $\left\{-\frac{2}{3} , -\frac{5}{9}\right\}$

3. Solve. $ y^{2}$ = 10*y* – 24

 **A** {4, 6} **C** {–4, 6}

**B** {–4, –6} **D** {4, –6}

4. The area of a rectangle is $y^{2}$ + 12*y* + 32 square inches. Which expression represents a possible length for the rectangle?

 **F** (*y* + 4) **H** (*y* – 8)

**G** (*y* – 4) **J** (*y* + 6)

5. Factor. $7y\left(y+4\right)+ 3(y+4)$

 **A** (*y* + 4) (7y + 3) **C** (*y* + 4) (7y − 3)

 **B** (7y + 3) (y − 4) **D** cannot be factored

6. What are the factors of the polynomial? 7$x^{2}$ – 16*x* + 4

 **A** (*x* – 3)(7*x* + 5) **C** (*x* + 2)(7*x* – 4)

 **B** (*x* – 4)(7*x* + 1) **D** (*x* – 2)(7*x* – 2)

7. Solve. 5$x^{2}$ + 13*x* = 6

 **F**$\left\{3 ,-\frac{2}{5}\right\}$ **H** $\left\{-3 ,\frac{2}{5}\right\}$

**G** $\left\{3 ,\frac{2}{5}\right\}$ **J** $\left\{-3 ,-\frac{2}{5}\right\}$

8. Solve. *x*(*x* + 3) – 2 = 2 + *x*(*x* + 1)

 **A** 2 **C** 1

**B** –2 **D** 0

9. Solve. $3x^{2}$ + 12*x* = 15

**F** {–5} **H** {5, –1}

**G** {–5, 1} **J** {–1}

10. Factor. 196$r^{2}$ – 81$t^{2}$

 **A** (14*r* + 9*t*)(14*r* + 9*t*) **C** (14*r* – 9*t*)(14*r* + 9*t*)

 **B** (14*r* – 9*t*)(14*r* – 9*t*) **D** prime

**Part II: Open Response**

**Each question is worth the indicated number of points. Please show the required work to receive full credit for problems worth multiple points. *For all questions in Part II, a correct numerical answer with no work shown will receive 1 point.***

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| **11.** Factor. If the polynomial cannot be factored, write *prime*. **(1 point)**  35$a^{3}$*b*$c^{2}$ – 45$a^{2}b^{2}$*c*  |

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| **12.** Factor. If the polynomial cannot be factored, write *prime*. **(1 point)**  $m^{2}$ + 12*m* – 28 |

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| **13**. Factor. If the polynomial cannot be factored, write *prime*. **(1 point)**  8$n^{2}$ – 36*n* + 40 |

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| **14.** The area of a rug is ($2y^{2}$ + *y* – 3) square feet. Factor the polynomial to find the possible dimensions of the rug. **(1 point)**   |

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| **15.** What are the solutions to the equation? **(2 points – work and solution/s)** 8$n^{2}$ + 4 = 12*n* |

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| **16.** Solve by factoring. **(2 points – work and solution/s)** 81$z^{2}$ = 49 |

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| **17.** The length of a rectangle is 6 centimeters more than the width. The area of the rectangle is 27 square centimeters. What is the length? **(2 points – work and solution)**  |

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| **18.** Factor. If the polynomial cannot be factored, write *prime*. **(2 points – work and factored form)**  *r*3 + 7*r*2 – 7*r* – 49  |

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| **19.** $9y^{2}$ + 15*y* – 14 is the product of what two binomials? **(1 point)**   |

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| **20.** Solve. **(2 points – work and solution/s)** –49 = 9$x^{2}$ + 42*x*  |