

Name_____

YOU CAN EARN UP TO 10 POINTS THAT YOU COULD BE ADDED TO ANY TEST GRADE, EXCEPT THE FINAL EXAM
THE EXTRA-CREDIT IS DUE ON 12/6.

SHOW ALL OF YOUR WORK FOR EACH QUESTION.

Factor by grouping.

1) $6r^2 + 27ry - 2xr - 9xy$

Factor the trinomial completely.

2) $-x^2 - 2x + 24$

3) $15x^2 + 26x + 8$

4) $24x^2 - 104x - 80$

Factor the polynomial completely.

5) $81x^2 - 64$

Factor the polynomial.

6) $81x^2 - 126xy + 49y^2$

Factor the polynomial completely.

7) $343p^3 - 1$

Find all solutions by factoring.

8) $2k^2 = 9k - 9$

Perform the indicated operation and express in lowest terms.

$$9) \frac{z^2 + 6z + 9}{z^2 + 7z + 12} \div \frac{z^2 + 3z}{z^2 + 11z + 28}$$

Solve the equation.

$$10) \frac{28}{x - 2} = 1 + \frac{30}{x + 2}$$