

NO WORK = NO CREDIT

Questions 1.5 pts each

Take Home Assignment 3

Factor completely and simplify:

Name _____

1. $8 - 20x^{-1} - 12x^{-2}$

2. $12x^2 - 14xy - 6y^2$

3. $4(r + 3)^{-\frac{1}{3}} - 5(r + 3)^{-\frac{7}{3}}$

4. Simplify. Assume all variables represent positive real numbers. Write answers with only positive exponents.

$$\frac{8m^{-3}p^4}{12m^4np^7}$$

5. Solve for x:

$$2x - 5q = 2w + q - ax$$

6. Super Nutty Mix costs \$4.75 per pound. Chocolate Lovers Mix costs \$3.50 per pound. The market wants to create 30 pounds of a ChocoNut Mix which will sell for \$4.00 by combining these two mixes. How many pounds of each should the market mix together?

7. Jacqui wants to earn \$1987.50 by next year for a study abroad program. She has \$22,500 to invest. She can invest part at 8% and part at 9.5%. How much should she put in each investment in order to earn the money she needs?

8. $(2x^4 + 5x^3 + 8x - 7) \div (x + 1)$

9. From p59 in your text, do #50(b).

Find the x- and y-intercepts of each graph(write your answers as points):

10. $4x - 3y = 8$

11. $y = 2x^2 - 5x + 5$

12. Write the equation of the line through (3, -2) and (-1, 5) (slope-intercept form)

13. Write the equation of the line parallel to $3x - 2y = 4$ through (-2, 5) (general form)

14. Write the equation of the line perpendicular to $3x - 2y = 4$ through (2, 0) (general form)