Name:_____ Date:_____

Homework sheet: Alg2H Arithmetic

1. Page 7, questions

1. Is $\frac{3}{17}$ rational or irrational?

5. Is $\sqrt{36}$ rational or irrational?

6. Is $\sqrt{19}$ rational or irrational?

7. Is $-\sqrt{16}$ rational or irrational?

17. $-\frac{2}{7}+\frac{3}{7}=$ $\frac{1}{7}$

19. $-\frac{11}{12}+\left(-\frac{5}{12}\right)=$ $\frac{-16}{12}=\frac{-4}{3}=-1\frac{1}{3}$

27. $-\frac{16}{5}-\left(-\frac{3}{5}\right)=$ $\frac{-13}{5}=-2\frac{3}{5}$

28. $-\frac{1}{2}-\left(-\frac{1}{12}\right)=$ $-\frac{1}{2}+\frac{1}{12}=$ $=\frac{-6}{12}+\frac{1}{12}=\frac{-5}{12}$

2. Page 12, questions

13. $-3\left(\frac{2}{-3}\right)=$ 2

21. $-\frac{9}{11}\cdot\left(-\frac{11}{9}\right)=$ 1

37. $\frac{3}{5}\div(-6)=$ $\frac{3}{5}\cdot\frac{1}{-6}=\frac{-1}{10}=-0.1$

41. $\frac{6}{7}\div\left(-\frac{9}{14}\right)=$ $\frac{6}{7}\cdot\frac{-14}{9}=\frac{2\cdot(-2)}{3}=-\frac{4}{3}=-1\frac{1}{3}$

3. Page 8, questions

45. $\frac{1}{2}\cdot\frac{2}{3}\cdot\frac{3}{4}$ $=\frac{1}{4}$

46. $\frac{1}{2}+\frac{2}{3}+\frac{3}{4}$ $=\frac{6+8+9}{12}=\frac{23}{12}=$ $=1\frac{11}{12}$

4. Page 12, questions

Find the reciprocal of:

46. $|-8|=8\rightarrow\frac{1}{8}$

47. $\frac{|7-19|}{-6}=\frac{12}{-6}=-2\rightarrow\frac{-1}{2}$

5. Page 24, questions

12. Factor $3x + 3y - 3z$

$3(x+y-z)$

14. Factor $4a + 8b - 4$

$4(a+2b-1) =$

$= 4(a+2b-1)$

25. Collect like terms $x - 6x$

$-5x$

30. Collect like terms

$12a + 3b - 5a + 6b$

$7a+9b$

31. Collect like terms $4x - 7 + 18x + 25$

$22x+18$

6. Page 24, questions

53. Simplify

$x - (5x + 9)$

$-4x-9$

57. Simplify

$8x - 9 - (7 - 5x) =$

$8x-9-7+5x =$

$13x-16$

59. Simplify

$-9(y + 7) - 6(y - 3) =$

$-9y-63-6y+18 =$

$-15y-45$

61. Simplify

$8y - 4(5y - 6)$