# 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. 
$$-\frac{11}{12} + \left(-\frac{5}{12}\right) = \frac{-16}{12} = \frac{-4}{3} = \frac{13}{3}$$

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

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

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

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

19. 
$$-\frac{11}{12} + \left(-\frac{5}{12}\right) = \frac{-16}{12} = \frac{-4}{3} = \frac{1}{3}$$
41.  $\frac{6}{7} \div \left(-\frac{9}{14}\right) = \frac{6}{7} - \frac{14}{9} = \frac{-4}{3} = -\frac{1}{3}$ 

## 3. Page 8, questions

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

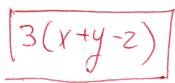
$$46. \ \frac{1}{2} + \frac{2}{3} + \frac{3}{4} = \frac{6 + 8 + 9}{12} = \frac{23}{12} =$$



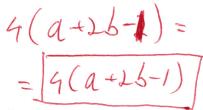
#### Page 12, questions Find the reciprocal of:

$$47. \frac{|7-19|}{-6} = \frac{11}{6} = -1 \Rightarrow \boxed{\frac{1}{2}}$$

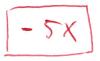
- 5. Page 24, questions
  - 12. Factor 3x + 3y 3z



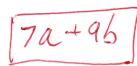
14. Factor 4a + 8b - 4



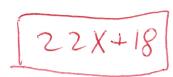
25. Collect like terms x - 6x



30. Collect like terms 12a + 3b - 5a + 6b



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



- 6. Page 24, questions
- 53. Simplify

$$\begin{array}{c|c} x - (5x + 9) \\ \hline + 4x - 9 \end{array}$$

57. Simplify

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

$$\begin{cases} x-9-7+5x = \\ 13x-16 \end{cases}$$

59. Simplify

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

61. Simplify

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