

Principles of Math 9
Module 2 Test Outline

1. Give the greatest common factor of

a. $6a^3b^2$ and $12ab^2$ _____

b. $4a^2b^2$ and $7a^3b^2$ _____

2. Factor each of the following if possible

a. $4x-12x^2$ _____

b. x^2+6x+9 _____

c. $4x^2+20x+24$ _____

3. Simplify the following

a. $\frac{48x^3y}{36xy^2}$

b. $\frac{4x^3y}{18xy^2} \times \frac{6x^3y^3}{20y}$

4. Solve the following problems. Show all work.

a. \$250 is shared between 3 people as follows: Fred gets 5 times the amount Albert gets. Doris gets \$40 more than Albert. How much does each person get?

b. Tad's walk to work is twice as long as Sue's. Walt walks 3km more than Sue to work. The total distance walked to work by these three people is 11km. How far does each person walk?

5. Solve the following:

a. $5(2y - 7) = 25$

b. $4x = 2 + 2(3x - 4)$

c. Solve for x:

$$4x - a = 3(3x + 1)$$

6. Solve for the following:

a. $\frac{1}{3d} + \frac{2}{5} = \frac{9}{5d} - \frac{1}{3}$

b. $\frac{3t}{4} - \frac{2t}{3} = 7$

7. Solve and graph the following inequalities.

a. $\frac{2}{3}x < 2$ <----->

b. $16x - 4x - 10 \geq 2$ <----->

8. What is the probability of tossing a coin 4 times and getting four consecutive heads?

9. If you are using a regular 6 sided die (dice) calculate the following probabilities:

a. Event A: rolling a 4 _____

b. Event B: rolling an odd number _____

c. Event C: rolling a number less than 4 _____