

Class Name : **MATH 006 SPRING 2018 - 06**Instructor Name : **Prof. Sitaraman**

Student Name : _____

Instructor Note : _____

1. Simplify.

$$\frac{20wx}{36wx}$$

2. Rewrite the following without an exponent.

$$(-2)^{-3}$$

3. Simplify.

$$(2b^6c^{-4})^{-5}$$

Write your answer using only positive exponents.

4. Simplify.

$$\left(\frac{m^3n^6}{m^5n^3}\right)^2$$

Write your answer using only positive exponents.

5. Simplify.

$$\frac{7x^4y^5}{49xy^2}$$

6. Rewrite the following without an exponent.

$$\left(\frac{2}{9}\right)^{-2}$$

7. Simplify.

$$(v^2)^6$$

Write your answer without parentheses.

8. Rewrite without parentheses.

$$-8y^4(-4y^2 + 8)$$

Simplify your answer as much as possible.

9. Multiply.

$$-(3x + 5)(7x - 4)$$

Simplify your answer.

10. Simplify.

$$\sqrt{\frac{50}{18}}$$

Be sure to write your answer in simplest form.

11. Write the following as an exponential expression.

$$\sqrt[7]{b^5}$$

12. Simplify. Write your answers without exponents.

$$16^{-\frac{5}{4}} = \square$$

$$\left(\frac{1}{4}\right)^{\frac{5}{2}} = \square$$

13. Simplify the expression.

$$\left(\frac{4}{y} \cdot \frac{1}{x}\right)^{-5}$$

Write your answer without using negative exponents.
Assume that all variables are positive real numbers.

14. Simplify.

$$\sqrt{18u^8}$$

Assume that the variable u represents a positive real number.

15. Write the following in simplified radical form.

$$\sqrt[3]{81}$$

16. Simplify.

$$\sqrt{20}$$

17. Simplify.

$$\sqrt{9y^3}$$

Assume that the variable represents a positive real number.

18. Write the following in simplified radical form.

$$\sqrt[3]{u^{11}}$$

Assume that the variable represents a positive real number.

19. Write the following in simplified radical form.

$$\sqrt[3]{24x^5}$$

Assume that the variable represents a positive real number.

20. Simplify.

$$\sqrt{u^{12}}$$

Assume that the variable represents a positive real number.

Homework 1 extra #1 Answers for class MATH 006 SPRING 2018 - 06

1. $\frac{5}{9}$

2. $-\frac{1}{8}$

3. $\frac{c^{20}}{32b^{30}}$

4. $\frac{n^6}{m^4}$

5. $\frac{x^3 y^3}{7}$

6. $\frac{81}{4}$

7. v^{12}

8. $32y^6 - 64y^4$

9. $-21x^2 - 23x + 20$

10. $\frac{5}{3}$

11. $b^{\frac{5}{7}}$

12.

$$16^{-\frac{5}{4}} = \frac{1}{32}$$

$$\left(\frac{1}{4}\right)^{\frac{5}{2}} = \frac{1}{32}$$

13. $\frac{1}{\frac{20}{y^3 x}}$

14. $3u^4\sqrt{2}$

15. $3\sqrt[3]{3}$

16. $2\sqrt{5}$

17. $3y\sqrt{y}$

18. $u^3\sqrt[3]{u^2}$

19. $2x\sqrt[3]{3x^2}$

20. u^6