

MATHEMATICS 115 SAMPLE TEST CHAPTERS 4

INSTRUCTOR: ANNE SISWANTO; TOTAL POINTS: 100; TIME: 50 MINUTES

Direction: A scientific calculator can be used during the test. Show all work on the test paper for full credit.

Write the number in scientific notation.

1) In 1997, the total value of imports and exports for Canada was \$318,160,000,000. 1) _____

Subtract.

2) $(11x + 22xy - 30y) - (18x - 7xy - 25y)$ 2) _____

Multiply and write the answer in scientific notation.

3) $(7.55 \times 10^4)(8.54 \times 10^{-3})$ 3) _____

4) $(7.5 \times 10^{-4})(6.1 \times 10^6)$ 4) _____

Simplify.

5) $(-5xy^4)^5$ 5) _____

6) $(4p^4s^4)^3(s^3)$ 6) _____

Multiply.

7) $-9x^2(-7x + 11)$ 7) _____

Multiply.

8) $(-2x - 11)(-4x - 5)$

8) _____

9) $(x - 2)(-3x + 12)$

9) _____

Multiply.

10) $(x - 4)(7x^2 + x + 7)$

10) _____

Multiply.

11) $(6a - 11)^2$

11) _____

Divide and write the answer in scientific notation.

12) $\frac{20.75 \times 10^{-8}}{5 \times 10^6}$

12) _____

Divide.

13) $\frac{36m^5p^2}{4m^8p}$

13) _____

Divide.

$$14) \frac{10x^4 - 7x^3 + 2x^2}{x^2}$$

14) _____

$$15) \frac{56x^5 + 16x^3 + 56x^7}{8x^5}$$

15) _____

Use long division to divide the polynomials.

$$16) \frac{x^2 - 2x - 8}{x - 4}$$

16) _____

$$17) \frac{7r^3 - 44r^2 - 26r - 63}{r - 7}$$

17) _____

$$18) \frac{8x^2 + 2x - 6}{4x - 3}$$

18) _____

$$19) \frac{z^3 - 8}{z - 2}$$

19) _____

Simplify. Write the answer with positive exponents.

$$20) (2m^4n^{-2})^4$$

20) _____

$$21) (x^{-9}y^{11}z^2)(x^{-2}y^{-2}z^4)$$

21) _____

$$22) \frac{7x^{-6}}{y^{-2}z^{-3}}$$

22) _____

Answer Key

Testname: M115T4S

1) 3.1816×10^{11}

2) $-7x + 29xy - 5y$

3) 6.45×10^2

4) 4.575×10^3

5) $-3125x^5y^{20}$

6) $64p^{12}s^{15}$

7) $63x^3 - 99x^2$

8) $8x^2 + 54x + 55$

9) $-3x^2 + 18x - 24$

10) $7x^3 - 27x^2 + 3x - 28$

11) $36a^2 - 132a + 121$

12) 4.15×10^{-14}

13) $\frac{9p}{m^3}$

14) $10x^2 - 7x + 2$

15) $7x^2 + 7 + \frac{2}{x^2}$

16) $x + 2$

17) $7r^2 + 5r + 9$

18) $2x + 2$

19) $z^2 + 2z + 4$

20) $\frac{16m^{16}}{n^8}$

21) $\frac{y^9z^6}{x^{11}}$

22) $\frac{7y^2z^3}{x^6}$