

MATHEMATICS 115 SAMPLE TEST CHAPTERS 1

INSTRUCTOR: ANNE SISWANTO; TOTAL POINTS: 100; TIME: 70 MINUTES

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

Write the prime factorization for the number.

1) 682

1) _____

Objective: (1.2) Write Prime Factorization for Number

Simplify to lowest terms.

2) $-\frac{14}{56}$

2) _____

Objective: (1.2) Simplify Fraction to Lowest Terms

Write fraction in lowest terms.

3) There are 36 inches to a yard. What fraction of a yard is 32 inches?

3) _____

Objective: (1.2) Solve Apps: Write Fraction in Lowest Terms

Subtract.

4) $\frac{3}{5} - \left(-\frac{5}{9}\right)$

4) _____

Objective: (1.3) Subtract Signed Fractions

Evaluate using the order of operations.

5) $13 + 19 \cdot 11$

Objective: (1.5) Evaluate Using Order of Operations I

5) _____

6) $(-5 - 8)(-3 + 6) - 4^4$

Objective: (1.5) Evaluate Using Order of Operations I

6) _____

7) $3 + 4^2(16) - (-25)$

Objective: (1.5) Evaluate Using Order of Operations I

7) _____

8) $14 - 5^2 + (-14) \div \sqrt{49}$

Objective: (1.5) Evaluate Using Order of Operations I

8) _____

9) $\frac{4}{5} \div \frac{1}{6} \cdot \left(\frac{3}{8} - \frac{1}{2} \right)$

Objective: (1.5) Evaluate Using Order of Operations II

9) _____

$$10) 5^3 - [4 + 2\sqrt{25 - 16}] + 25 - 14$$

Objective: (1.5) Evaluate Using Order of Operations II

10) _____

$$11) \frac{44 - 4(18 - 15)}{(2 + 6)^2 - 2(37 - 6)}$$

Objective: (1.5) Evaluate Using Order of Operations II

11) _____

$$12) \frac{5^2 + (14 - 5)^2}{28 \div 4 - (5 + 1)}$$

Objective: (1.5) Evaluate Using Order of Operations II

12) _____

13) $| -18 | \div 2 \cdot (-17) \cdot | 4 |$

Objective: (1.5) Evaluate Using Order of Operations III

13) _____

14) $-3 \cdot (-12) \div 3 \cdot (-17)$

Objective: (1.5) Evaluate Using Order of Operations III

14) _____

15) $\frac{-19 + 5^2 - (-15)}{-21 - 9 + 33}$

Objective: (1.5) Evaluate Using Order of Operations IV

15) _____

16) $\frac{-2 + 3^2 - (-8)}{2 - 4 + 7}$

Objective: (1.5) Evaluate Using Order of Operations IV

16) _____

17) $\frac{-2(6^2) - 6(9 - 5)}{-6(2 - 7) \div (-5)}$

17) _____

Objective: (1.5) Evaluate Using Order of Operations IV

Solve.

- 18) Stephen can exempt his math exam if he has a test average greater than or equal to 65 on the five tests in the course. His current test scores are 76, 41, 76, 90. Using trial and error, determine the minimum score on the last test that will give him an average of 65.

18) _____

Objective: (1.5) Solve Apps: Find Average

Translate the phrase to an algebraic expression.

- 19) three subtracted from four times a number

19) _____

Objective: (1.6) Translate Phrase to Algebraic Expression

- 20) negative five decreased by the sum of a and b

20) _____

Objective: (1.6) Translate Phrase to Algebraic Expression

Evaluate the expression using the given values.

21) $3x^2 + 6x - 1$; $x = -4$

21) _____

Objective: (1.7) Evaluate Expression Using Given Values I

22) $4xy - x^3$; $x = -9$, $y = 2$

22) _____

Objective: (1.7) Evaluate Expression Using Given Values I

23) $\frac{z^2}{-2x + y}$; $x = 5$, $y = 1$, and $z = -3$.

23) _____

Objective: (1.7) Evaluate Expression Using Given Values II

Simplify by combining like terms.

24) $9x - (-2x) - 3 - (-3x) - 2$

24) _____

Objective: (1.7) Simplify by Combining Like Terms

25) $4p^2 + 3p^3 - 9p^2 - 7p^3$

25) _____

Objective: (1.7) Simplify by Combining Like Terms

Answer Key

Testname: M115T1S

1) $2 \cdot 11 \cdot 31$

2) $-\frac{1}{4}$

3) $\frac{8}{9}$

4) $\frac{52}{45}$

5) 222

6) -295

7) 284

8) -13

9) $-\frac{3}{5}$

10) 126

11) 16

12) 106

13) -252

14) -84

15) 7

16) 3

17) 16

18) 42

19) $4x - 3$

20) $-5 - (a + b)$

21) 23

22) 657

23) -1

24) $-5 + 14x$

25) $-5p^2 - 4p^3$