Student: _____ **Date:** _____ **Time:** _____	**Instructor:** Tom Blackburn **Program:** NEIU MATHEMATICS PLACEMENT TESTS **Test Bank:** MyMathTest: Developmental Mathematics	**Assignment:** NEIU MPT PRACTICE TEST: Elementary Algebra

1. Simplify: $\left(\frac{3x^4y^5}{9xy^7}\right)^2 =$

○A. $\frac{x^6}{3y^4}$

○B. $\frac{x^6}{9y^4}$

○C. $9x^6y^{10}$

○D. $\frac{x^3}{9y^4}$

2. Square the binomial.

$(2x-3)^2$

$(2x-3)^2 =$ ☐

(Simplify your answer.)

3. Find $-\sqrt{\frac{16}{9}}$.

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○A. The answer is ☐.
(Simplify your answer. Type an integer or a fraction.)

○B. The square root is not a real number.

4. Use the FOIL method to find the product.

$(6z-u)(4z+5u)$

The answer is ☐. (Simplify your answer.)

5. Simplify: $(4x^2 - 3x + 3) - (2x^2 + 7x - 6) =$

- A. $2x^2 - 10x - 3$
- B. $2x^2 - 10x + 9$
- C. $6x^2 + 4x + 9$
- D. $2x^2 + 4x - 3$

6. If $4x + 2 \geq 7x + 26$, then

- A. $x \geq 27$
- B. $x \geq -8$
- C. $x \geq 8$
- D. $x \leq -8$

7. If $-6(2x + 1) = 4x + 10$, then $x =$

- A. -2
- B. $-\frac{1}{4}$
- C. $-\frac{1}{2}$
- D. -1

8. Add.

$\frac{1}{7} + \left(-\frac{3}{5}\right)$

$\frac{1}{7} + \left(-\frac{3}{5}\right) = \square$

(Simplify your answer. Type an integer or a fraction.)

9. Simplify the numerator and the denominator separately, then find the quotient.

$\frac{-5(-10)}{21 - (-4)}$

$\frac{-5(-10)}{21 - (-4)} = \square$

$= \square$

(Type a fraction first. Then simplify to find the quotient.)

10. Multiply and simplify.

$$\frac{9z^8}{7p^2} \cdot \frac{49p^4}{81z}$$

The simplified product is $\square$.

11. Evaluate $|-26+20| =$

A. -6

B. -46

C. 6

D. 46

12. Simplify: $\dfrac{6x^3-4x^2+8x}{2x} =$

A. $-x^2+8$

B. $3x^2-2x+4$

C. $3x^3-2x^2+4x$

D. $6x^3-4x^2+4$

13. Translate to an equation, then solve.

The product of 4, and a number increased by 7, is -36.

What is the number? $\square$

14. Evaluate: $\dfrac{3^2+2^2 \cdot 7-\sqrt{49}}{8-4 \div 2+4}$

A. 14

B. 3

C. 30

D. 5

15. A contractor finds that 6 gallons of paint will cover 900 sq ft of wall area. How much wall area could be covered with 24 gallons of paint?

The contractor could cover ☐ sq ft.
(Simplify your answer. Type an integer or a decimal.)

16. If $x^2 - 3x - 18 = 0$, then x =

- ◯A. -6 or 3
- ◯B. -3 or 6
- ◯C. -1 or 18
- ◯D. -18 or 1

17. Find the sum.

$-3+[3+(-1)+(-1)]$

$-3+[3+(-1)+(-1)]=$ ☐

18. Factor: $12x - 15$

- ◯A. $3(4x-5)$
- ◯B. $3(4x-x)$
- ◯C. $-3x$
- ◯D. $3(4x-15)$

19. The difference between two positive integers is 56. One integer is three times as great as the other. Find the integers.

- ◯A. 56 and 84
- ◯B. 84 and 140
- ◯C. 28 and 84
- ◯D. 28 and 56

20. Factor.

$4b^2 - 121p^2$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

○A. $4b^2 - 121p^2 =$ ▒

○B. The binomial is not factorable.

21. Which of the following is a linear factor of $2x^2 - 7x - 15$?

○A. $2x - 3$

○B. $x - 3$

○C. $x + 5$

○D. $2x + 3$

22. Simplify: $(-5a^2b^3)(2a^4b^2) =$

○A. $-10a^6b^5$

○B. $-3a^6b^5$

○C. $-10a^{-2}b$

○D. $-10a^8b^6$

23. Multiply.

$\left(-\frac{9}{8}\right)\left(-\frac{5}{4}\right)$

$\left(-\frac{9}{8}\right)\left(-\frac{5}{4}\right) =$ ☐

(Type an integer or a simplified fraction.)

24. Simplify the expression and combine like terms.
$2t + 2(1 - 4t)$

$2t + 2(1 - 4t) =$ ☐

25. Solve the equation.

$7y + 9 = -9 + 10y - 6y$

○A. $\frac{1}{6}$

○B. $-\frac{17}{6}$

○C. -6

○D. $-\frac{1}{6}$

26. Simplify: $(3x - 1)(2x + 3) =$

○A. $x + 2$

○B. $6x^2 + 7x - 3$

○C. $13x + 3$

○D. $6x^2 + 7x - 3x$

27. Solve the linear equation. Don't forget to perform a check.

$-\frac{3}{5}x = \frac{2}{5}$

$x =$ ☐

(Type an integer or a fraction. Simplify your answer, if necessary.)

28. Factor by grouping.

$4a^2 + 9a - 28$

$4a^2 + 9a - 28 =$ ☐

29. Simplify the expression.

$-9 - [(7 - 6) - (-9 - 3)]$

$-9 - [(7 - 6) - (-9 - 3)] =$ ☐

30. Simplify: $\dfrac{x^2-3x-10}{x^2-4x-5} =$

A. $\dfrac{(x+5)(x-2)}{(x-5)(x+1)}$

B. $\dfrac{x-2}{x-1}$

C. $\dfrac{x+2}{x+1}$

D. $-\dfrac{2}{x}$

Student: _____
Date: _____
Time: _____

Instructor: Tom Blackburn
Program: NEIU MATHEMATICS PLACEMENT TESTS
Test Bank: MyMathTest: Developmental Mathematics

Assignment: NEIU MPT PRACTICE TEST: Elementary Algebra

1. B

2. $4x^2 - 12x + 9$

3. A, $-\frac{4}{3}$

4. $24z^2 + 26zu - 5u^2$

5. B

6. D

7. D

8. $-\frac{16}{35}$

9. $\frac{50}{25}$
2

10. $\frac{7z^7p^2}{9}$

11. C

12. B

13. -16

14. B

15. 3600

16. B

17. -2

18. A

19. C

20. A, $(2b + 11p)(2b - 11p)$

21. D

22. A

23. $\frac{45}{32}$

24. $-6t + 2$

25. C

26. B

27. $-\frac{2}{3}$

28. $(4a-7)(a+4)$

29. -22

30. C