Student: _____ **Date:** _____ **Time:** _____	**Instructor:** Gary Parker **Course:** MTH 065 - Elementary Algebra II - Fall 2010 **Book:** Bittinger: Elementary & Intermediate Algebra Graphs & Models, 3e	**Assignment:** Required Sample Exit Exam

1. Factor the trinomial.

$b^2 - 80 - 2b$

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

A. The answer is ☐.
(Factor completely.)

B. The trinomial is not factorable.

2. Solve using the principle of zero products.

$t(t+4) = 0$

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

A. The solution(s) is/are $t =$ ☐.
(Use a comma to separate answers as needed. Type each solution only once.)

B. There is no solution.

3. Factor.

$w^2 - 49$

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

A. $w^2 - 49 =$ ☐ (Factor completely.)

B. The polynomial is prime.

4. Solve for x.

$x^2 - x + 5 = 0$

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

A. $x =$ ☐
(Simplify your answer. Type exact answers, using radicals as needed. Type your answer in the form $a + bi$. Use a comma to separate answers as needed.)

B. There is no solution.

5. Solve by completing the square.

$x^2 - 14x = 10$

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

A. $x =$ ☐
(Use a comma to separate answers as needed. Type exact answers, using radicals as needed.)

B. There is no solution.

6. Divide.

$(c^2 + 16c + 63) \div (c + 7)$

The quotient is ☐.
(Simplify your answer.)

7. Solve.

$(x + 3)^2 = 1$

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

A. The solution is $x =$ ☐.
(Use a comma to separate answers as needed.)

B. There is no solution.

8. Divide and simplify.

$$\frac{48x^{24}y^7}{8x^2y}$$

Choose the correct answer below.

A. $6x^{22}y^6$

B. $6x^{12}y^7$

C. $48x^{22}y^7$

D. $6x^{26}y^8$

9. Multiply.

$(3 - x)(8 - 5x)$

$(3 - x)(8 - 5x) =$ ☐
(Simplify your answer.)

10. Multiply.

$(9x^4)(9x^3)$

The answer is ☐.

(Simplify your answer.)

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11. Evaluate the polynomial for $x = 7$.

$2x^2 - 5x + 1$

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

12. Factor.

$6b^2 - 3 - 17b$

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

○ A. $6b^2 - 3 - 17b =$ ☐ (Factor completely.)

○ B. The trinomial is not factorable.

13. Complete the square.

$x^2 + 4x$

The trinomial square is $x^2 + 4x +$ ☐.
(Simplify your answer. Type an integer.)

In factored form, this is equivalent to $(x +$ ☐$)^2$.
(Simplify your answer. Type an integer.)

14. Subtract.

$(-2x + 6) - (x^2 + x - 6)$

$(-2x + 6) - (x^2 + x - 6) =$ ☐
(Simplify your answer.)

15. Simplify.

$(4m^{15}n^{18})^3$

$(4m^{15}n^{18})^3 =$ ☐
(Simplify your answer. Type exponential notation with positive exponents.)

16. Factor the trinomial.

$3s^2 - 10s + 8$

The answer is ☐.
(Factor completely.)

17. Solve.

$b^2 - 7b = 0$

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

○ A. The solution(s) is/are b = ☐.
(Type an integer or a simplified fraction. Use a comma to separate answers as needed. Type each solution only once.)

○ B. There is no solution.

18. Multiply.

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

$(x + 7)(x - 5) =$ ☐
(Simplify your answer.)

19. Solve.

$t^2 + 11t + 28 = 0$

The solutions are ☐.
(Use a comma to separate answers.)

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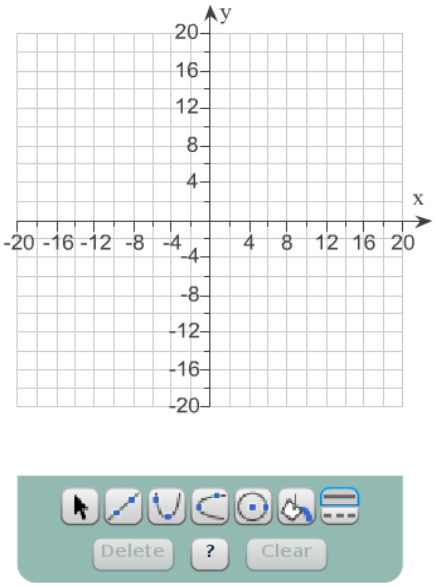
20. For the quadratic function, (a) find the axis of symmetry and (b) graph the function.

$$g(x) = x^2 - 6x + 9$$

Use the graphing tool to graph the equation.

Click to enlarge graph

The axis of symmetry is $x =$ ☐.



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1. A, $(b+8)(b-10)$

2. A, $0, -4$

3. A, $(w+7)(w-7)$

4. A, $\frac{1}{2}+\frac{\sqrt{19}}{2}i, \frac{1}{2}-\frac{\sqrt{19}}{2}i$

5. A, $7+\sqrt{59}, 7-\sqrt{59}$

6. $c+9$

7. A, $-2, -4$

8. A

9. $24-23x+5x^2$

10. $81x^7$

11. 64

12. A, $(6b+1)(b-3)$

13. $\frac{4}{2}$

14. $-x^2-3x+12$

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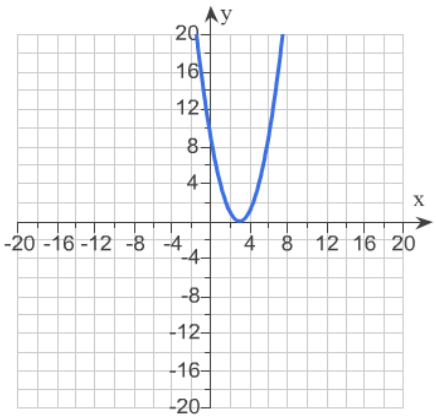
15. $64m^{45}n^{54}$

16. $(3s-4)(s-2)$

17. A, 0,7

18. $x^2+2x-35$

19. $-7,-4$

20. 

3