MAT0024C Beginning Algebra Name: _____
Test Chapter 6 Makeup (Form A2) Date: _____
Kincade Section: _____

This exam is worth 100 points (5 points each). You MUST show your work to receive full credit.

Factor out the GCF.

1) $7x + 21$ 1) _____

2) $j(k - 4) - 3(k - 4)$ 2) _____

Factor by grouping.

3) $t^2 + 8t + 5t + 40$ 3) _____

Factor completely.

4) $7x^2 - 7x^2y - 21x + 21xy$ 4) _____

Factor.

5) $x^2 + 6x - 16$ 5) _____

6) $x^2 + 2xy - 35y^2$ 6) _____

Factor completely.

7) $4x^3 + 4x^2 - 24x$ 7) _____

Factor.

8) $4x^2 - 3x + 2$ 8) _____

9) $-54x^2 - 45x + 54$ 9) _____

Factor the perfect square.

10) $49x^2 - 84xy + 36y^2$ 10) _____

Factor.

11) $81y^2 - 25$ 11) _____

12) $d^3 + 27$ 12) _____

Factor completely.

13) $(r + s)^2 - 36$ 13) _____

A) $(r + s + 6)^2$
B) $(r + s - 6)(r + s + 6)$
C) $\left[(r + s)^2 - 6\right]^2$
D) $(r + s - 6)^2$

Factor.

14) $2u^3 - 16$ 14) _____

A) $(u + 4)(u^2 - 4u - 16)$
B) $2(u + 4)(u^2 - 4u + 16)$
C) $(u - 4)(u^2 + 4u + 16)$
D) $2(u - 4)(u^2 + 4u + 16)$

Factor completely.

15) $x^2 + 47x + 48$ 15) _____

16) $7x^2 + 7xy + y^2$ 16) _____

Solve.

17) $18n^2 + 10n = 0$ 17) _____

18) $r(r - 16) = -64$ 18) _____

Solve the problem.

19) The product of two consecutive integers is 29 more than their sum. Find the integers. 19) _____

Solve the problem. Round to the nearest tenth, if necessary.

20) If an object is thrown upward with an initial velocity of 48 ft/sec, its height after t sec is given by $h = 48t - 16t^2$. Find the number of seconds before the object hits the ground. 20) _____