Suppl Algebra Review

Name_____

Factoring Review ACC Geometry

Date_____

Factor each completely.

1) $b^2 - 20b + 100$

$-10 \cdot -10 = 100$

$-10 + -10 = -20$

$(b-10)(b-10)$

$\boxed{= (b-10)^2}$

2) $m^2 + 10m + 9$

$\boxed{(m+1)(m+9)}$

I read this like: what multiplies to give you c?

$\boxed{1} \cdot \boxed{9} = 9$

and also

$\boxed{1} + \boxed{9} = 10$

adds to give you the middle term?

3) $x^2 - 7x + 12$

4) $x^2 + 2x - 48$

5) $b^2 + b - 56$

6) $x^2 + 9x + 20$

7) $\frac{5x^3}{5x^2} + \frac{15x^2}{5x^2}$

Factor out GCF

$\boxed{5x^2(x+3)}$

8) $6b^2 + 24b - 72$

Factor out GCF

$6(b^2 + 4b - 12)$

Factor this now

$\boxed{6} \cdot \boxed{-2} = -12$

$\boxed{6} + \boxed{-2} = 4$

$\boxed{6(b+6)(b-2)}$

look it is still here

9) $4a^3 + 20a^2 - 200a$

10) $6b^2 - 18b - 168$

11) $8n^2 + 63n - 8$

GCF = 1

multiply $A \cdot C = 8 \cdot 8 = -64$

Factor out the

$(8n-1)(n+8)$

	8n	-1
n	$8n^2$	$-1n$
8	$64n$	-8

← c

12) $6a^2 - 36a$

$6a(a-6)$

13) $8r^2 + 26r + 15$

14) $10m^2 + 11m - 6$

Factor each and find all roots.

15) $x^2 + 2x - 3 = 0$

$\boxed{-1} \cdot \boxed{3} = -3$

$\boxed{(x+3)(x-1)=0}$ $-1+3 = 2$

$x+3=0$ $x-1=0$

$\boxed{x=-3}$ $\boxed{x=1}$ $\boxed{\{-3, 1\}}$

16) $x^2 - 3x - 10 = 0$

17) $x^2 - 7x + 12 = 0$

18) $x^2 - 2x - 15 = 0$

19) $x^2 - 9 = 0$

20) $x^2 - 9x + 20 = 0$

21) $x^2 - x - 12 = 0$

22) $x^2 - 4x + 4 = 0$

23) $x^2 + 6x + 5 = 0$

24) $x^2 + 4x - 5 = 0$

Answers to Factoring Review ACC Geometry (ID: 1)

1) $(b-10)^2$
2) $(m+1)(m+9)$
3) $(x-3)(x-4)$
4) $(x+8)(x-6)$
5) $(b-7)(b+8)$
6) $(x+4)(x+5)$
7) $5x^2(x+3)$
8) $6(b+6)(b-2)$
9) $4a(a+10)(a-5)$
10) $6(b-7)(b+4)$
11) $(n+8)(8n-1)$
12) $6a(a-6)$
13) $(2r+5)(4r+3)$
14) $(5m-2)(2m+3)$
15) Factors to: $(x-1)(x+3)=0$
Roots: $\{1, -3\}$
16) Factors to: $(x+2)(x-5)=0$
Roots: $\{-2, 5\}$
17) Factors to: $(x-4)(x-3)=0$
Roots: $\{4, 3\}$
18) Factors to: $(x-5)(x+3)=0$
Roots: $\{5, -3\}$
19) Factors to: $(x-3)(x+3)=0$
Roots: $\{3, -3\}$
20) Factors to: $(x-5)(x-4)=0$
Roots: $\{5, 4\}$
21) Factors to: $(x+3)(x-4)=0$
Roots: $\{-3, 4\}$
22) Factors to: $(x-2)^2=0$
Roots: $\{2 \text{ mult. } 2\}$
23) Factors to: $(x+1)(x+5)=0$
Roots: $\{-1, -5\}$
24) Factors to: $(x-1)(x+5)=0$
Roots: $\{1, -5\}$