Prep Algebra 1 Name (KEY 2023)

9.5 Practice A

Date_____ Period____

Factor the common factor (GCF) out of each expression.

1) $40x^2 + 60x + 30$

$10(4x^2 + 6x + 3)$

↑ GCF

2) $-21x^5 + 30x^2 + 15$

$-3(7x^5 - 10x^2 - 5)$

↑ GCF

When Leading Coef is Negative FACTOR OUT A NEGATIVE GCF

3) $10x^4 - 5x^2 - 25x$

$5x(2x^3 - x - 5)$

↑ GCF

4) $60x^4 + 24x^3 + 54x^2$

$6x^2(10x^2 + 4x + 9)$

↑ GCF

Factor each completely.

5) $x^2 + 9x + 18$ ← SIGNS THE SAME (+,+)

$(x + 6)(x + 3)$

6) $n^2 + 14n + 40$

$(n + 4)(n + 10)$

7) $x^2 - 12x + 27$ ← SIGNS THE SAME (-,-)

$(x - 9)(x - 3)$

8) $x^2 - 8x + 15$

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

9) $n^2 - 4n - 21$ ← OPPOSITE SIGNS (+,-)

$(n - 7)(n + 3)$

10) $x^2 + 3x - 10$

$(x - 2)(x + 5)$

Factor the common factor out of each expression.

11) $70x^3 - 63x^2 + 49x$

$7x(10x^2 - 9x + 7)$

12) $12x^4 - 60x^2 - 30x$

$6x(2x^3 - 10x - 5)$

Notice - LC

13) $-10x^2 + 20x - 20$

$-10(x^2 - 2x + 2)$

14) $48x^2 + 16x + 24$

$8(6x^2 + 2x + 3)$

Factor each completely.

15) $x^2 + 2x - 80$

$(x - 8)(x + 10)$

same (+, +)

16) $x^2 + 10x + 16$

$(x + 2)(x + 8)$

17) $x^2 - 5x - 24$

$(x - 8)(x + 3)$

+, -

18) $x^2 - 4x - 12$

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

19) $x^2 + 14x + 49$

$(x + 7)^2$ OR

$(x+7)(x+7)$

same (-, -)

20) $x^2 - 8x + 16$

$(x - 4)^2$ OR

$(x-4)(x-4)$

21) $x^2 - 2x - 80$

$(x - 10)(x + 8)$

22) $x^2 - 7x + 6$

$(x - 6)(x - 1)$

23) $x^2 - 4$

$(x + 2)(x - 2)$

24) $x^2 - 100$

$(x - 10)(x + 10)$