

## Algebra 2 Honors – Summer Packet Online Questions – Answer Sheet

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### Factoring GCF

1. C
2. A
3. C
4. A
5. D
6. A
7. A
8. B
9. A
10. D

### Factoring

1.  $(a + 7)(a + 4)$
2.  $(x + 8)(x + 6)$
3.  $(r + 6)(r - 5)$
4.  $(n - 5)(n - 2)$
5.  $(n - 9)(n + 1)$
6.  $(k + 9)(k + 5)$
7.  $(k + 8)(k - 3)$
8.  $(x - 10)(x - 7)$
9.  $(x - 10)(x - 7)$
10.  $(m - 3)(m - 1)$
11.  $(n - 4)(n - 1)$
12.  $(x - 8)(x + 3)$
13.  $(p + 7)(p + 1)$
14.  $(k + 10)(k - 2)$

### Difference of Squares

1.  $(3n + 13)(3n - 13)$
2.  $(8m + 7)(8m - 7)$
3.  $(12r + 13)(12r - 13)$
4.  $(x + 5)(x - 5)$
5.  $(2n + 5)(2n - 5)$
6.  $(7x + 6)(7x - 6)$
7.  $(14v + 3)(14v - 3)$
8.  $(3n + 4)(3n - 4)$
9.  $(7a + 13)(7a - 13)$
10.  $(13k + 9)(13k - 9)$
11.  $(13x + 5)(13x - 5)$
12.  $(5n + 4)(5n - 4)$
13.  $(5x + 8)(5x - 8)$
14.  $(11m + 1)(11m - 1)$
15.  $(12p + 7)(12p - 7)$
16.  $(4x + 13)(4x - 13)$

### Factoring

1.  $(3x - 2)(x + 10)$
2.  $(5r - 6)(r + 5)$
3.  $(5p + 1)(p + 9)$
4.  $(11x + 7)(x + 12)$
5.  $(3x + 4)(x + 7)$
6.  $(7n - 11)(n + 9)$
7.  $(5x + 11)(x + 11)$
8.  $(5k - 8)(k - 10)$
9.  $(7p - 5)(p - 12)$
10.  $(5k - 1)(k + 11)$
11.  $(3x + 8)(3x - 4)$
12.  $(9n + 4)(n + 3)$
13.  $(9a + 10)(a + 10)$
14.  $(5x + 6)(2x + 1)$
15.  $(9x - 5)(x + 10)$
16.  $(3v - 5)(2v + 3)$
17.  $(4a - 9)(a - 1)$
18.  $(5x + 2)(2x + 9)$
19.  $(6v + 5)(v - 5)$
20.  $(3n - 7)(3n - 10)$
21. C
22. B
23. A
24. A
25. B
26. D
27. A
28. D
29. A
30. B

### Exponents Practice

1.  $2v^6$
2.  $6x^8$
3.  $24x^5$
4.  $5a^5$
5.  $3k^6$
6.  $6p^{11}$
7.  $64x^6$
8.  $64n^{12}$
9.  $16m^6$
10.  $64r^3$
11.  $16x^{12}$
12.  $81n^{16}$

$$13. \frac{2}{3}$$

$$14. \frac{-1}{v^2}$$

$$15. \frac{1}{x}$$

$$16. \frac{1}{n}$$

$$17. -2a$$

$$18. k$$

$$19. \frac{16}{x^{16}}$$

$$20. x^6$$

$$21. 16$$

$$22. 16m^{18}$$

$$23. \frac{1}{4}$$

$$24. \frac{1}{2x^7}$$

$$25. \frac{n^6}{4}$$

$$26. \frac{b^2}{4}$$

$$27. \frac{3}{r^3}$$

$$28. \frac{3}{x^4}$$

$$29. \frac{4}{n^4}$$

$$30. \frac{3}{x^2}$$

$$31. \frac{y^9}{8x^3}$$

$$32. \frac{1}{256x^{28}y^8}$$

$$33. \frac{1}{u^6}$$

$$34. \frac{y^3}{8x^{11}}$$

$$35. \frac{4u^{14}}{v^{22}}$$

$$36. 8y^5$$

### Simplify the radical

1.  $12\sqrt{6}$
2.  $14\sqrt{13}$
3.  $11\sqrt{13}$
4.  $7\sqrt{5}$
5.  $10\sqrt{5}$
6.  $6\sqrt{11}$
7. 4
8. 10
9.  $15\sqrt{10}$
10.  $12\sqrt{10}$
11.  $10\sqrt{2}$
12.  $14\sqrt{2}$
13. 21
14. 27