

Name _____ Pd _____ Date _____ **2P Test Study Guide**

Directions: Turn in this Study Guide on the day of your test to earn +5 EXTRA CREDIT on your test.

#1 - 8: Simplify the monomial (2P1 & 2P2).

1) $2x^3y^5 \cdot 3xy^3$ 2) $-4ab^2c^3 \cdot 7ab^4c$ 3) $(2e^2fg^4)^4$ 4) $(4h^3j^2k)^3$

5) $\frac{18a^2bc^5}{9ab^3c}$ 6) $\frac{25x^4y^3z}{5x^6yz}$ 7) $\frac{(6c^2d)^3 \cdot e}{d^3e}$ 8) $\frac{h^0j^3k^4}{k^9}$

#9 - 10: Find the area of the shape.

9) triangle with base $9cd^2$ and height $4c^2d^4$

10) triangle with base $2xy^3$ and height $3x^4y$

#11 - 12: A student is attempting to factor out the GCF of a polynomial. (2P3)

11) Polynomial: $7a^2b^3c^4 - 28a^3b^6c + 35ab^3c$ Student's GCF: $35ab^3c$

What would you tell the student is correct so far? How do you know?

What would you tell the student needs to improve? Explain what needs to improve.

12) Polynomial: $81x^2y^3z^4 + 9xyz - 45x^2y^2z^5$ Student's GCF: $9x^2y^3z^5$

What would you tell the student is correct so far? How do you know?

What would you tell the student needs to improve? Explain what needs to improve.

#13 - 14: Factor out the GCF of the polynomial. (2P3)

13) $36g^2hj + 45g^3h - 9g^2h$ 14) $6x^4y^7z^3 - 18x^5y^3z + 36x^3y^3z^3$

#15 - 19: Multiply the polynomials by any method - show ALL steps. (2P4)

15) $(2x - 5)(4x + 1)$ 16) $(5x + 2)(x - 2)$ 17) $(8x - 5)(9x - 2)$

18) $(2x - 3)(3x^2 + 5x - 1)$

19) $(5x + 3)(2x^2 - 8x - 3)$

#20 - 23: Factor the trinomials. Show how you know you chose the correct numbers. (2P5)

20) $x^2 - 8x - 9$

21) $x^2 - 2x - 8$

22) $a^2 + 13a - 30$

23) $b^2 - 7b + 6$

#24 - 27: Factor the trinomials. Show how you know you chose the correct numbers. (2P6)

24) $2x^2 - 13x + 20$

25) $4m^2 + 7m + 3$

26) $6x^2 + 37x + 6$

27) $4x^2 - 20x + 25$

#28 - 29: Factor the trinomials **completely**. Show how you know you chose the correct numbers. (2P6)

28) $14x^2 - 40x - 6$

29) $9h^2 - 30h - 24$

#30 - 35: Factor the special cases. (2P7)

30) $25y^2 - 1$

31) $9j^2 + 36j + 36$

32) $81h^2 - 121$

33) $100x^2 - 140x + 49$

34) $c^2 - 16$

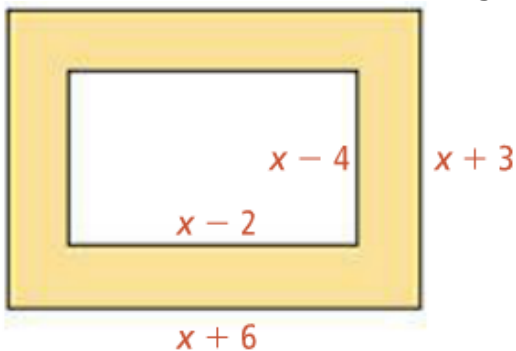
35) $x^2 - 18x + 81$

#36 - 37: What is the radius of the circle with the given area? (2P8)

36) $A = \pi(x^2 + 16x + 64)$

37) $A = \pi(x^2 - 14x + 49)$

#38: Find the area of the shaded region. (2P8)



#39 (2P8): Student Council is creating a rectangular banner with a square in the middle of it that has all the names of students in the organization. The banner has a length of $4x + 1$ and a width of $3x + 2$. The square with the names has a side length of $3x - 1$. What is the area of the space on the banner, not including the square for names? (Sketch a picture to support your work.)