

Day 5 - Homework and Unit Review

Period _____

Factor each completely. Please show all work. Draw your own boxes!

1) $2m^2 + 40m + 200$

2) $4x^2 - 40x + 64$

3) $-5x^2 + 15x$

4) $5x^2 + 25x + 30$

5) $-n^2 + 16n - 60$

6) $3x^2 - x - 24$

7) $7m^2 + 8m + 1$

8) $3n^2 - 25n + 50$

9) $5x^2 + 41x + 42$

10) $4x^2 + 4x - 15$

11) $10k^2 - 43k + 12$

12) $9a^2 - 39a + 40$

13) $9x^2 - 59x - 28$

14) $b^2 - b$

15) $v^2 - 2v - 48$

Simplify each expression by combining like terms.

16) $-9n + 10n$

17) $6r + 10r$

Write each expression in exponential form.

18) $(\sqrt[5]{10x})^3$

19) $\sqrt[3]{6x}$

Write each expression in radical form.

20) $(7m)^{\frac{3}{2}}$

21) $(6k)^{\frac{5}{3}}$

Simplify each expression then name your polynomial answer by degree and number of terms.

22) $(x + 5x^3) - (7x + 4x^3)$

23) $(3a^2 + a - 3) - (4 + 4a + 7a^2)$

Simplify each expression by eliminating grouping symbols and combining like terms.

24) $10(2 - 7p) - 10p$

25) $-3m - 8(3 - 5m)$

Find each product.

26) $(2b + 2)(4b + 2)$

27) $(m - 2)(2m + 2)$

28) $(n + 2)(2n - 2)$

29) $(4v + 1)(v - 5)$

30) If the area of a rectangle is $A = l \cdot w$, find the expression for the area of a rectangle with a $l = x - 8$ and $w = 2x + 1$.

Simplify. Your answer should contain only positive exponents.

31) $m^2 \cdot 4m^{-2}n^3 \cdot 3nm^{-1}$

32) $\frac{4u^0v^3}{4uv^3}$

33) $(2u^3v^0)^{-1}$

34) $(x^{-1}y^4 \cdot x^2y^2)^3$

35) $\frac{2x^0y^2}{(2x^0)^{-4}}$

36) $\left(\frac{2x^4y^4 \cdot x^3y^3}{2xy^{-4}}\right)^{-2}$

37) $2u \cdot 3v^{\frac{4}{3}}$

38) $\left(x^{\frac{3}{2}}y^{\frac{3}{2}}\right)^{\frac{2}{3}}$

39) $\frac{4x^{\frac{2}{3}}}{2x^{\frac{2}{3}}}$

40) $\frac{m^2n^{\frac{3}{4}}}{m \cdot \left(m^{\frac{1}{2}}n^{\frac{1}{2}}\right)^3}$