

Algebra 1-b

FINAL TEST

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Find the coefficient and degree of each of these monomials

- 1) $-3x^2y$ 2) $9tu^3$ 3) $7zyx$ 4) $-5abc$

MULTIPLY AND GIVE THE PRODUCT

- 5) $(7s^2t)(11s^2t^4)$ 6) $(3a^2b)(10a^3b^2)$
7) $(5rs)(-2s^3r)$ 8) $(2ad)(-7d^2a)$

Subtract these polynomials.

- 9) $(11x + 13) - (11x - 13)$ 10) $(13y - 2) - (13y + 2)$

Multiply these polynomials and put in proper order.

- 11) $(\frac{1}{2}x + \frac{1}{2})(\frac{1}{2}x - \frac{1}{2})$ 12) $(\frac{1}{4}p - \frac{1}{2})(\frac{1}{4}p + \frac{1}{2})$
13) $(5x - 7 + 4x^2)(3 + 2x^2 - 3x)$ 14) $(x^2 - 2xy + y^2)(x^2 + 2xy + y^2)$

Square the following binomials.

- 15) $(t - 6)^2$ 16) $(3a^2 - 2b)^2$ 17) $(3a + 7b)^2$

Divide the following polynomials.

- 18) $A + 6 \overline{)A^2 + 10A + 24}$ 19) $r - 2 \overline{)r^2 - 18r + 32}$

- 20) $(s^2 - 12s + 35) \div (s - 7)$ 21) $(t^2 + 72 - 17t) \div (t - 9)$

Put in order and divide.

22) $(27m^3 + 64n^3) \div (3m + 4n)$ 23) $(a^5 + b^5) \div (a + b)$

24) $a^3 - b^3 - 3a^2b + 3ab^2 \overline{) a^5 - b^5 - 5a^4b + 5ab^4 + 10a^3b^2 - 10a^2b^3}$

25) $-2n^3 - 5n^2 + 8n + 7 \overline{) -6n^5 - 25n^4 + 7n^3 + 81n^2 + 3n - 28}$

Factor the following as completely as possible.

26) $x^6z - y^4z$

27) $4x^4 - 4y^4$

28) $\frac{a^4}{25} - \frac{b^4}{49}$

29) $\frac{16x^2}{y^2} - \frac{m^2}{25}$

30) $x^2 + 15x + 56$

31) $x^2 + 11x + 30$

32) $6x^2 + 34x + 48$

33) $9x^2 + 20x + 4$

34) $1/8x^2 + 6x + 64$

35) $27x^2 + 90x + 27$

36) $m^4 - 10m^2p - 24p^2$

37) $x^4 - 2x^2y - 63y^2$

38) $9x^2n^3 - 16n^3$

39) $ax^2 - 2ax - 35a$

40) $3c^2 + 4c - 7$

41) $6s^2t - 7st - 5t$

42) $6x^2 - 19xy + 15y^2$

43) $16x^2 - 32xy + 15y^2$

44) $40x^4y + 22x^3y^2 - 6x^2y^3$

45) $6x^3 - 12x^2 - 18x$