





5y+y+y3+5= y(y+1)+5(y+1)=(y+5)(y+1) y + 2y - 4 - 2y= y(y+2)-(2+y2)2=(y+2)(y-2) 2+21+32+72=2(2+3)+7(2+3)=(Z+4)(Z+3) 2-32+2-3=-3(2+1)+Z(1+Z)=(3+2)(2+1) $x^{3} + 28 - 14x^{2} - 2x = x(x^{2} - 2) + 4(2 - x^{2}) = (14+x)(x^{2} - 2)$ $X^3 - 6 + 2X - 3X^2 = X(X^2 + 2) - 3(X^2 + 2) = (X - 3)(X^2 + 2)$ 263-6-4673b=(2673).b-2(2673)=(6-2)(2673) 9, 16 ab + 56 c+ 1003+ 32ac2 = 16a (62+202)+5c(62+202) 20n-35 a-14 an +50n = (10n-7a) 2n + 5 (10n-7a) 18 a+27ab +14 ac+21 bc = 2 a(9a++c) + 3b(9a+7c) 2x2-15y2-3x2+10xy2=-3z(xz+5y)+2xg(xz+5y) (0. a) ax - 2a - 3x + 6 = (x - 2)(a - 3) a = 1.5; x = 3.5 $(3.5-2)(1.5-8) = 1.5 \cdot (-1.5) = -2.25$ (5) 2 a + b + 2 a² + ab = (1+a)(2a+b) a = -1, b = 998 (1-1)(-2+938)=0 6) 7 by + 4b - 14y - 8; y = 28 b = 3 (7 y +4)(b-2) = (3 +4)(2 -2) = (4 +4) (-12) - 11 - 12 - 9 2) $5ab - 7b + 5a^{2} - 7a = (5a - 7)(a + b)$ a = 3.7 b = -3.7 $(5 \cdot 3.7 - 7)(3.7 - 3.7) = 0$

p-2.(2.5)p=0 p-5p=0 a=1 b=-5 C=0 $P_1 = -(-5) + \sqrt{(-5)^2} - 0 = 5 + 5 = 10 = 5$ $p_2 = (-5) - \sqrt{(-5)^2} - \frac{5-5}{2} = \frac{0}{2}$ 3. 6) $n^2 - nm = n(n - m)$, $6a^2 - 9ab = 3a(2a - 3b)$ $mn-n^2=n(m-n)$, $2ab-3b^2=b(2a-3b)$ 2) 4x-8=4(x-2), x-2x=x(x-2), -5-15m=-5(1-3m)21mn+7n=7n(3m+1)a) 2 by-bz, 2ay-az; 4ax-az, 4bx-bz δ) 6 a x - 3x, -2a+1; 3by-3y, c-cb b) a -2a, 3a-6; 4ab-2ab 2) 3 m n² 6 m² n, a b n- 2 a b m; a² 3 - 9 a² x, 9 x² - x⁴ 5. a) 3a + 3 + na + n = 3(a+1) + n(a+1) = ((a+1)3+n)0) 6mx - 2m + 9x - 3 = 2m(3x - 1) + 3(3x - 1) = (3x - 1)2m + 3)b) ax + 3x + 4 a + 12 = x (a+3)+4(a+3)=(a+3).4+x) 2) 2mx - 3m + 4x - 6 = m(2x - 3) + 2(2x - 3) = ((2x - 3) + 2 + m)a) 7kn -6k-14n+12= k(7n-6) - 2(7n-6)=(4n-6) - x-2) (1) $7x + 9a - 5ax - 5a^2 = 7(x+a) - 5a(x+a) = (x+a) - 7 - 5a$ 6) 9m-9mn-5m+5n=9m(m-n)-5(m-n)-(m-n)-9m-5) 2) bc+3ac-2ab-6a=c(b+3a)-(b+3a)=(b+3a)-(c-2a)

40 a be +21 be -56ac - 15 a b = (-7c+a 2.5b) (8ac-3b) 16 xy - 5y 2-10z3 + 32 xz = (16 x-52) (9 +223) 30x+10c-25CX-12X=-5C+6X)(5X-2) 18x2-10kxy+20ky-36kxz=2(x-2k)(9xz-5ky) $ax^{2}-ay-bx^{2}+cy+by-cx^{2}=(x^{2}-y)(a-b-c)$ $xy^{2}-by^{2}-ax+ab+y^{2}-a=(y^{2}-a)(1+x-b)$ 12. ax+bx+cx+ay+by+cy=(x+y)(a+b+c) $ab-a^2b^2+a^3b^3-c+abc-ca^2b^2=unsimplifieble$

Homework 8 30.17 a) 910 = 910 = 137-123 (137+123) = 910 = 4 8) 3242-36 = (324-36) · (324+36) = 288 · 360 = 72 13.2.9.8 + 13.2.2.2 - 13.2 (9.8 + 2.2) - 13.2.18 13.2 - 6.6 4.5.3.1-4.5.2.1 = 4.5.(3.1-2.1)-4.5.1 4.5.10 = 45 30.18 δ) xy-5y=0 a) $2x^{2} + xy = 0$ $xy = -2x^{2}$ $y = -2x^{2}$ xy=54 y=54 y = - 2x B = 3x y = 0 2)4x +xy = 0 9 = 3 xy Xy = -4X y = 3xyy = - 4X 311 a) $2m^{2} \Rightarrow 2$, $\frac{4}{2} = 2$, $\frac{2m}{m} = 2$ b) $\frac{4x}{x} = 4$; $\frac{8xy}{x} = 8$; $\frac{16x}{x} = 16$ b) $\frac{15ab^{2}}{ab} = 15b$, $\frac{25ab}{25b} = a$, $\frac{30a^{2}b}{a^{5}b} = 30a$