0.2 Keep On Factoring Homework

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Factor completely:

1) $12x^2y^3 - 18x^3y^2 - 24x^2y^2$

$= 6x^2y^2(2y - 3x - 4)$

2) $\frac{1}{4}m^{-2}n^3 + \frac{1}{2}m^5n$

$= \frac{1}{4}m^{-2}n(n^2 + 2m^7)$

3) $4t(m+n) + 5s(m+n)$

$= (m+n)(4t+5s)$

4) $(x+2)(x-2) + 3(x+2)$

$= (x+2)((x-2)+3)$

$= (x+2)(x+1)$

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

$= \quad (x+3)((x+3)-2)$

$= \quad (x+3)(x+1)$

6) y^2+1-y^3-y

$= \quad -y^3+y^2-y+1$

$= \quad -y^2(y-1)-1(y-1)$

$= \quad (y-1)(y^2-1)$

7) $a^2+6bc-3ac-2ab$

$=$

8) $a^2b^2-7ba^2+6a^2-4b^2+28b-24$

$=$

9) $n^2-10n+16$

$=$

10) $4t^2-13t+10$

$=$

11) $6w^2+13w-28$

$=$

12) $12x^2-2x-30$

$=$

13) $49s^2-56st+16t^2$

$=$

14) $100m^2-121n^2$

$=$

15) $36x^6 - 25y^4$

$=$

16) $x^2 + 6xy + 9y^2 - 36$

$=$

17) $25y^2 - 30y + 9 - 4c^2 - 4cd - d^2$

$=$

18) $8a^2 - 32$

$=$

19) $x^{4n} - y^{6n}$

$=$

20) $-4xy^2 - 4xy - x$

$=$