Assignment - Factorization

Date_____

Factor the common factor out of each expression.

1) $8np^4m + 80n^2p$

2) $-6np^3 - 2n^2p^5m^6$

3) $12a^3b^2 - 30a^5b^2c^2$

4) $16y^4z^5 + 12y^2z^3x$

5) $99v^4u + 110v^5 + 66v^4$

6) $-60b^9a^5 + 50b^5a - 20b^6$

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7) $33x^4y - 11x^3y + 11xy$

8) $-11xy^4 + 132x^2y^2 + 66x^4y^2$

Factor each completely.

9) $4n^3 - 2n^2 - 14n + 7$

10) $48m^3 - 6m^2 - 8m + 1$

11) $5v^3 - 8v^2 - 25v + 40$

12) $15x^3 + 3x^2 + 35x + 7$

13) $392v^3u^2 + 1008v^4u + 648v^5$

14) $2352x^2 - 1680xy + 300y^2$

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15) $343b^2 - 98ba + 7a^2$

16) $1053b^2 - 325a^2$

Solve each equation by factoring.

17) $4a^2 - 12a + 10 = 1$

18) $2r^2 - 9 = -3r$

19) $4m^2 - 6 = 2m$

20) $9m^2 - 3m - 11 = 3m^2 - 2$

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Answers to Assignment - Factorization (ID: 1)

1) $8np(mp^3 + 10n)$
2) $-2np^3(3 + m^6np^2)$
3) $6a^3b^2(2 - 5a^2c^2)$
4) $4y^2z^3(4y^2z^2 + 3x)$
5) $11v^4(9u + 10v + 6)$
6) $10b^5(-6a^5b^4 + 5a - 2b)$
7) $11xy(3x^3 - x^2 + 1)$
8) $11xy^2(-y^2 + 12x + 6x^3)$
9) $(2n^2 - 7)(2n - 1)$
10) $(6m^2 - 1)(8m - 1)$
11) $(v^2 - 5)(5v - 8)$
12) $(3x^2 + 7)(5x + 1)$
13) $8v^3(7u + 9v)^2$
14) $12(14x - 5y)^2$
15) $7(7b - a)^2$
16) $13(9b + 5a)(9b - 5a)$
17) $\left\{\frac{3}{2}\right\}$
18) $\left\{\frac{3}{2}, -3\right\}$
19) $\left\{\frac{3}{2}, -1\right\}$
20) $\left\{\frac{3}{2}, -1\right\}$

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