

Name : _____

Score : _____

Teacher : _____

Date : _____

Factoring By Grouping

Factor each completely. If non-factorable, write "Non-factorable".

1) $m^3 + 4m^2 - 8m - 32$

6) $2d^3 + 16d^2 - 12d - 96$

2) $6w^3 - 9w^2 + 10w - 15$

7) $6r^3 + 18r^2 - 42r - 126$

3) $36h^3 - 36h^2 - 72h + 72$

8) $54r^3 - 144r^2 - 36r + 96$

4) $24w^3 - 84w^2 - 96w + 336$

9) $6c^3 + 54c^2 + 30c + 270$

5) $h^3 + 5h^2 + 6h + 30$

10) $6s^3 + 8s^2 + 18s + 24$



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Factoring By Grouping

Factor each completely. If non-factorable, write "Non-factorable".

1) $m^3 + 4m^2 - 8m - 32$
 $(m^2 - 8)(m + 4)$

6) $2d^3 + 16d^2 - 12d - 96$
 $2(d^2 - 6)(d + 8)$

2) $6w^3 - 9w^2 + 10w - 15$
 $(3w^2 + 5)(2w - 3)$

7) $6r^3 + 18r^2 - 42r - 126$
 $6(r^2 - 7)(r + 3)$

3) $36h^3 - 36h^2 - 72h + 72$
 $36(h^2 - 2)(h - 1)$

8) $54r^3 - 144r^2 - 36r + 96$
 $6(3r^2 - 2)(3r - 8)$

4) $24w^3 - 84w^2 - 96w + 336$
 $12(w^2 - 4)(2w - 7)$

9) $6c^3 + 54c^2 + 30c + 270$
 $6(c^2 + 5)(c + 9)$

5) $h^3 + 5h^2 + 6h + 30$
 $(h^2 + 6)(h + 5)$

10) $6s^3 + 8s^2 + 18s + 24$
 $2(s^2 + 3)(3s + 4)$

