MA90   Exercises for section 6.1   Factoring the GCF and Factoring by Grouping

Short Answer

    1.   Factor the expression by taking out the greatest common factor.

        $28x + 21$

        .

    2.   Factor the expression by taking out the greatest common factor.

        $9x - 18y$

        .

    3.   Factor the expression by taking out the greatest common factor.

        $8a^2 - 8a - 88$

        .

    4.   Factor the expression by taking out the greatest common factor.

        $15a^2 - 75a^3$

        .

5. Factor the expression by taking out the greatest common factor.

    $36x^2y - 32xy^2$

    .

6. Factor the expression by taking out the greatest common factor.

    $7x^3 + 28x^2 - 35x$

    .

7. Factor by grouping.

    $xy + 9x + 5y + 45$

    .

8. Factor by grouping.

    $ab + 7a - 5b - 35$

    .

9. Factor by grouping.

    $4ax + 12x - 7a - 21$

    .

10. Factor by grouping.

    $6xb - 7b - 24x + 28$

    .

11. Factor by grouping.

    $b^2 - xb - ab + xa$

    .

12. Factor the polynomial by grouping the terms together two at a time.

    $21x^2 + 9x + 49x + 21$

    .

13. Factor the polynomial by grouping the terms together two at a time.

    $x^3 - 3x^2 - 7x + 21$

    .

14. Factor the polynomial by grouping the terms together two at a time.

    $56x^3 - 49x^2 + 16x - 14$

MA90 Exercises for section 6.1   Factoring the GCF and Factoring by Grouping
Answer Section

SHORT ANSWER

1. ANS:
    $7(4x + 3)$

    PTS: 1
2. ANS:
    $9\left(x - 2y\right)$

    PTS: 1
3. ANS:
    $8\left(a^2 - a - 11\right)$

    PTS: 1
4. ANS:
    $15a^2 \cdot (1 - 5a)$

    PTS: 1
5. ANS:
    $4x \cdot y \cdot \left(9x - 8y\right)$

    PTS: 1
6. ANS:
    $7x \cdot \left(x^2 + 4x - 5\right)$

    PTS: 1
7. ANS:
    $(x + 5) \cdot \left(y + 9\right)$

    PTS: 1
8. ANS:
    $(a - 5) \cdot (7 + b)$

    PTS: 1
9. ANS:
    $(4x - 7) \cdot (a + 3)$

    PTS: 1

10. ANS:
    $(b - 4) \cdot (6x - 7)$

    PTS: 1
11. ANS:
    $(b - a) \cdot (b - x)$

    PTS: 1
12. ANS:
    $(3x + 7) \cdot (7x + 3)$

    PTS: 1
13. ANS:
    $(x - 3) \cdot \left(x^2 - 7 \right)$

    PTS: 1
14. ANS:
    $(8x - 7) \cdot \left(7x^2 + 2 \right)$

    PTS: 1