Algebra 1 ECA Remediation

Name Answer Key

Homework 28.3

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Factor each completely.

1) $2v^2 - 13v + 15$

$2(15)$

$+30$

1	30
2	15
$-3v$	$-10v$
5	6

$2v^2 - 3v - 10v + 15$

$v(2v-3) - 5(2v-3)$

$(2v-3)(v-5)$

2) $5k^2 - 6k - 8$

$5(-8)$

-40

1	40
2	20
$+4k$	$-10k$
5	8

$5k^2 + 4k - 10k - 8$

$k(5k+4) - 2(5k+4)$

$(5k+4)(k-2)$

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

$2(-3)$

-6

$+1x$	$-6x$
2	3

$2x^2 + x - 6x - 3$

$x(2x+1) - 3(2x+1)$

$(2x+1)(x-3)$

4) $6a^2 - 29a + 28$

$6(28)$

$+168$

1	168
2	84
3	56
4	42
6	28
7	24
$-8a$	$-21a$
12	14

$6a^2 - 8a - 21a + 28$

$2a(3a-4) - 7(3a-4)$

$(3a-4)(2a-7)$

5) $6n^2 - n - 1$

$6(-1)$

-6

1	6
$+2n$	$-3n$

$6n^2 + 2n - 3n - 1$

$2n(3n+1) - 1(3n+1)$

$(3n+1)(2n-1)$

6) $6x^2 + 17x - 14$

$6(-14)$

-84

1	84
2	42
3	28
$-4x$	$+21x$
6	14
7	12

$6x^2 - 4x + 21x - 14$

$2x(3x-2) + 7(3x-2)$

$(3x-2)(2x+7)$

Solve each system by substitution.

7) $y = -5x + 9$
$4x - 7y = 15$

$4x - 7(-5x+9) = 15$

$4x + 35x - 63 = 15$

$39x - 63 = 15$
$+63 \quad +63$

$\frac{39x}{39} = \frac{78}{39}$

$x = 2$ $\quad (2, -1)$

$y = -5(2) + 9$

$y = -10 + 9$

$y = -1$

8) $3x - 7y = -15$
$y = x + 5$

$3x - 7(x+5) = -15$

$3x - 7x - 35 = -15$
$+35 \quad +35$

$\frac{-4x}{-4} = \frac{20}{-4}$

$x = -5$

$y = -5 + 5$

$y = 0$

$(5, 0)$

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Answers to Homework 28.3

1) $(2v-3)(v-5)$
2) $(5k+4)(k-2)$
3) $(2x+1)(x-3)$
4) $(3a-4)(2a-7)$
5) $(3n+1)(2n-1)$
6) $(3x-2)(2x+7)$
7) $(2, -1)$
8) $(-5, 0)$

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