

A.APR.A.1 Operations with Polynomials 3

- 1 The expression $2x^2 - x^2$ is equivalent to
 - 1) x^0
 - 2) 2
 - 3) x^2
 - 4) $-2x^4$
- 2 Which expression is equivalent to $-3x(x - 4) - 2x(x + 3)$?
 - 1) $-x^2 - 1$
 - 2) $-x^2 + 18x$
 - 3) $-5x^2 - 6x$
 - 4) $-5x^2 + 6x$
- 3 The expression $(3x^2 + 2xy + 7) - (6x^2 - 4xy + 3)$ is equivalent to
 - 1) $-3x^2 - 2xy + 4$
 - 2) $3x^2 - 2xy + 4$
 - 3) $-3x^2 + 6xy + 4$
 - 4) $3x^2 - 6xy - 4$
- 4 The expression $(2x^2 + 6x + 5) - (6x^2 + 3x + 5)$ is equivalent to
 - 1) $-4x^2 + 3x$
 - 2) $4x^2 - 3x$
 - 3) $-4x^2 - 3x + 10$
 - 4) $4x^2 + 3x - 10$
- 5 The expression $(x^2 - 5x - 2) - (-6x^2 - 7x - 3)$ is equivalent to
 - 1) $7x^2 - 12x - 5$
 - 2) $7x^2 - 2x + 1$
 - 3) $7x^2 + 2x + 1$
 - 4) $7x^2 + 2x - 5$
- 6 When $5x + 4y$ is subtracted from $5x - 4y$, the difference is
 - 1) 0
 - 2) $10x$
 - 3) $8y$
 - 4) $-8y$
- 7 When $3x^2 - 8x$ is subtracted from $2x^2 + 3x$, the difference is
 - 1) $-x^2 + 11x$
 - 2) $x^2 - 11x$
 - 3) $-x^2 - 5x$
 - 4) $x^2 - 5x$
- 8 When $3g^2 - 4g + 2$ is subtracted from $7g^2 + 5g - 1$, the difference is
 - 1) $-4g^2 - 9g + 3$
 - 2) $4g^2 + g + 1$
 - 3) $4g^2 + 9g - 3$
 - 4) $10g^2 + g + 1$
- 9 When $4x^2 + 7x - 5$ is subtracted from $9x^2 - 2x + 3$, the result is
 - 1) $5x^2 + 5x - 2$
 - 2) $5x^2 - 9x + 8$
 - 3) $-5x^2 + 5x - 2$
 - 4) $-5x^2 + 9x - 8$
- 10 What is the result when $2x^2 + 3xy - 6$ is subtracted from $x^2 - 7xy + 2$?
 - 1) $-x^2 - 10xy + 8$
 - 2) $x^2 + 10xy - 8$
 - 3) $-x^2 - 4xy - 4$
 - 4) $x^2 - 4xy - 4$

- 11 When $8x^2 + 3x + 2$ is subtracted from $9x^2 - 3x - 4$, the result is
- 1) $x^2 - 2$
 - 2) $17x^2 - 2$
 - 3) $-x^2 + 6x + 6$
 - 4) $x^2 - 6x - 6$
- 12 When $2x^2 - 3x + 2$ is subtracted from $4x^2 - 5x + 2$, the result is
- 1) $2x^2 - 2x$
 - 2) $-2x^2 + 2x$
 - 3) $-2x^2 - 8x + 4$
 - 4) $2x^2 - 8x + 4$
- 13 What is the result when $4x^2 - 17x + 36$ is subtracted from $2x^2 - 5x + 25$?
- 1) $6x^2 - 22x + 61$
 - 2) $2x^2 - 12x + 11$
 - 3) $-2x^2 - 22x + 61$
 - 4) $-2x^2 + 12x - 11$
- 14 When $6x^2 - 4x + 3$ is subtracted from $3x^2 - 2x + 3$, the result is
- 1) $3x^2 - 2x$
 - 2) $-3x^2 + 2x$
 - 3) $3x^2 - 6x + 6$
 - 4) $-3x^2 - 6x + 6$
- 15 What is the result when $6x^2 - 13x + 12$ is subtracted from $-3x^2 + 6x + 7$?
- 1) $3x^2 - 7x + 19$
 - 2) $9x^2 - 19x + 5$
 - 3) $9x^2 - 7x + 19$
 - 4) $-9x^2 + 19x - 5$
- 16 If $2a^2 - 6a + 5$ is subtracted from $3a^2 - 2a + 3$, the result is
- 1) $5a^2 - 8a + 8$
 - 2) $a^2 + 4a - 2$
 - 3) $-a^2 - 4a + 2$
 - 4) $a^2 - 8a + 8$
- 17 When $3a^2 - 2a + 5$ is subtracted from $a^2 + a - 1$, the result is
- 1) $2a^2 - 3a + 6$
 - 2) $-2a^2 + 3a - 6$
 - 3) $2a^2 - 3a - 6$
 - 4) $-2a^2 + 3a + 6$
- 18 If $2x^2 - 4x + 6$ is subtracted from $5x^2 + 8x - 2$, the difference is
- 1) $3x^2 + 12x - 8$
 - 2) $-3x^2 - 12x + 8$
 - 3) $3x^2 + 4x + 4$
 - 4) $-3x^2 + 4x + 4$
- 19 When $3x^2 - 2x + 1$ is subtracted from $2x^2 + 7x + 5$, the result will be
- 1) $-x^2 + 9x + 4$
 - 2) $x^2 - 9x - 4$
 - 3) $-x^2 + 5x + 6$
 - 4) $x^2 + 5x + 6$
- 20 When $-2x^2 + 4x + 2$ is subtracted from $x^2 + 6x - 4$, the result is
- 1) $-3x^2 - 2x + 6$
 - 2) $-x^2 + 10x - 2$
 - 3) $2x^2 - 2x - 6$
 - 4) $3x^2 + 2x - 6$

- 21 If $2x^2 - x + 6$ is subtracted from $x^2 + 3x - 2$, the result is
- 1) $x^2 + 2x - 8$
 - 2) $x^2 - 4x + 8$
 - 3) $-x^2 + 2x - 8$
 - 4) $-x^2 + 4x - 8$
- 22 When $3a^2 - 7a + 6$ is subtracted from $4a^2 - 3a + 4$, the result is
- 1) $a^2 + 4a - 2$
 - 2) $a^2 - 10a - 2$
 - 3) $-a^2 - 4a + 2$
 - 4) $7a^2 - 10a + 10$
- 23 When $x^2 + 3x - 4$ is subtracted from $x^3 + 3x^2 - 2x$, the difference is
- 1) $x^3 + 2x^2 - 5x + 4$
 - 2) $x^3 + 2x^2 + x - 4$
 - 3) $-x^3 + 4x^2 + x - 4$
 - 4) $-x^3 - 2x^2 + 5x + 4$
- 24 Subtract $5x^2 - 7x - 6$ from $9x^2 + 3x - 4$.
- 25 Subtract $2x^2 - 5x + 8$ from $6x^2 + 3x - 2$ and express the answer as a trinomial.
- 26 When $\frac{3}{2}x^2 - \frac{1}{4}x - 4$ is subtracted from $\frac{5}{2}x^2 - \frac{3}{4}x + 1$, the difference is
- 1) $-x^2 + \frac{1}{2}x - 5$
 - 2) $x^2 - \frac{1}{2}x + 5$
 - 3) $-x^2 - x - 3$
 - 4) $x^2 - x - 3$
- 27 When $\frac{7}{8}x^2 - \frac{3}{4}x$ is subtracted from $\frac{5}{8}x^2 - \frac{1}{4}x + 2$, the difference is
- 1) $-\frac{1}{4}x^2 - x + 2$
 - 2) $\frac{1}{4}x^2 - x + 2$
 - 3) $-\frac{1}{4}x^2 + \frac{1}{2}x + 2$
 - 4) $\frac{1}{4}x^2 - \frac{1}{2}x - 2$
- 28 Expressed in simplest form, $\frac{x-7}{6} - \frac{3x-2}{12}$ is equivalent to
- 1) $\frac{2x+5}{6}$
 - 2) $\frac{2x+9}{6}$
 - 3) $\frac{-x-12}{12}$
 - 4) $\frac{-x-16}{12}$
- 29 Find the difference when $\frac{4}{3}x^3 - \frac{5}{8}x^2 + \frac{7}{9}x$ is subtracted from $2x^3 + \frac{3}{4}x^2 - \frac{2}{9}$.

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Answer Section

1 ANS: 3 REF: 080623a

2 ANS: 4

$$-3x(x-4) - 2x(x+3) = -3x^2 + 12x - 2x^2 - 6x = -5x^2 + 6x$$

REF: 081114ia

3 ANS: 3 REF: 080423a

4 ANS: 1 REF: 010707a

5 ANS: 3 REF: 060511a

6 ANS: 4 REF: 061130ia

7 ANS: 1 REF: 010523a

8 ANS: 3 REF: 080819ia

9 ANS: 2 REF: 060923ia

10 ANS: 1 REF: 011126ia

11 ANS: 4 REF: 061226ia

12 ANS: 1 REF: 061322ia

13 ANS: 4 REF: 011429ia

14 ANS: 2 REF: 061414ia

15 ANS: 4 REF: 081428ia

16 ANS: 2 REF: spring9805a

17 ANS: 2 REF: 010019a

18 ANS: 1 REF: 060019a

19 ANS: 1 REF: 080020a

20 ANS: 4 REF: 080209a

21 ANS: 4 REF: 010429a

22 ANS: 1 REF: 010619a

23 ANS: 1 REF: 011314a2

24 ANS:

$$4x^2 + 10x + 2$$

REF: 080123a

25 ANS:

$$4x^2 + 8x - 10$$

REF: 010934a

26 ANS: 2 REF: 011114a2

27 ANS: 3 REF: 061515a2

28 ANS: 3 REF: 068927siii

29 ANS:

$$\frac{2}{3}x^3 + \frac{11}{8}x^2 - \frac{7}{9}x - \frac{2}{9}$$

REF: 011635a2