

**A.APR.A.1 Operations with Polynomials 2b**

- 1 The expression  $2x^2 - x^2$  is equivalent to
- 2 Which expression is equivalent to  $2(3g - 4) - (8g + 3)$ ?
- 3 Which expression is equivalent to  $-3x(x - 4) - 2x(x + 3)$ ?
- 4 The expression  $3(x^2 - 1) - (x^2 - 7x + 10)$  is equivalent to
- 5 The expression  $(3x^2 + 2xy + 7) - (6x^2 - 4xy + 3)$  is equivalent to
- 6 The expression  $(2x^2 + 6x + 5) - (6x^2 + 3x + 5)$  is equivalent to
- 7 The expression  $(x^2 - 5x - 2) - (-6x^2 - 7x - 3)$  is equivalent to
- 8 If  $A = 3x^2 + 5x - 6$  and  $B = -2x^2 - 6x + 7$ , then  $A - B$  equals
- 9 When  $5x + 4y$  is subtracted from  $5x - 4y$ , the difference is
- 10 When  $3x^2 - 8x$  is subtracted from  $2x^2 + 3x$ , the difference is
- 11 When  $3g^2 - 4g + 2$  is subtracted from  $7g^2 + 5g - 1$ , the difference is
- 12 When  $4x^2 + 7x - 5$  is subtracted from  $9x^2 - 2x + 3$ , the result is
- 13 What is the result when  $2x^2 + 3xy - 6$  is subtracted from  $x^2 - 7xy + 2$ ?
- 14 When  $8x^2 + 3x + 2$  is subtracted from  $9x^2 - 3x - 4$ , the result is
- 15 When  $2x^2 - 3x + 2$  is subtracted from  $4x^2 - 5x + 2$ , the result is
- 16 What is the result when  $4x^2 - 17x + 36$  is subtracted from  $2x^2 - 5x + 25$ ?
- 17 When  $6x^2 - 4x + 3$  is subtracted from  $3x^2 - 2x + 3$ , the result is
- 18 What is the result when  $6x^2 - 13x + 12$  is subtracted from  $-3x^2 + 6x + 7$ ?

Regents Exam Questions

A.APR.A.1: Operations with Polynomials 2b

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- 19 If  $2a^2 - 6a + 5$  is subtracted from  $3a^2 - 2a + 3$ , the result is
- 20 When  $3a^2 - 2a + 5$  is subtracted from  $a^2 + a - 1$ , the result is
- 21 If  $2x^2 - 4x + 6$  is subtracted from  $5x^2 + 8x - 2$ , the difference is
- 22 When  $3x^2 - 2x + 1$  is subtracted from  $2x^2 + 7x + 5$ , the result will be
- 23 When  $-2x^2 + 4x + 2$  is subtracted from  $x^2 + 6x - 4$ , the result is
- 24 If  $2x^2 - x + 6$  is subtracted from  $x^2 + 3x - 2$ , the result is
- 25 When  $3a^2 - 7a + 6$  is subtracted from  $4a^2 - 3a + 4$ , the result is
- 26 When  $x^2 + 3x - 4$  is subtracted from  $x^3 + 3x^2 - 2x$ , the difference is
- 27 Express in simplest form:  
 $(3x^2 + 4x - 8) - (-2x^2 + 4x + 2)$
- 28 Subtract  $5x^2 - 7x - 6$  from  $9x^2 + 3x - 4$ .
- 29 Subtract  $5x^2 + 2x - 11$  from  $3x^2 + 8x - 7$ . Express the result as a trinomial.
- 30 Subtract  $2x^2 - 5x + 8$  from  $6x^2 + 3x - 2$  and express the answer as a trinomial.
- 31 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
- 32 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
- 33 Expressed in simplest form,  $\frac{x-7}{6} - \frac{3x-2}{12}$  is equivalent to
- 34 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:

$$x^2$$

REF: 080623a

2 ANS:

$$-2g - 11$$

$$2(3g - 4) - (8g + 3) = 6g - 8 - 8g - 3 = -2g - 11$$

REF: 011707ai

3 ANS:

$$-5x^2 + 6x$$

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

REF: 081114ia

4 ANS:

$$2x^2 + 7x - 13$$

$$3(x^2 - 1) - (x^2 - 7x + 10)$$

$$3x^2 - 3 - x^2 + 7x - 10$$

$$2x^2 + 7x - 13$$

REF: 061610ai

5 ANS:

$$-3x^2 + 6xy + 4$$

REF: 080423a

6 ANS:

$$-4x^2 + 3x$$

REF: 010707a

7 ANS:

$$7x^2 + 2x + 1$$

REF: 060511a

8 ANS:

$$5x^2 + 11x - 13$$

REF: 061403ai

9 ANS:

$$-8y$$

REF: 061130ia

- 10 ANS:  
 $-x^2 + 11x$   
REF: 010523a
- 11 ANS:  
 $4g^2 + 9g - 3$   
REF: 080819ia
- 12 ANS:  
 $5x^2 - 9x + 8$   
REF: 060923ia
- 13 ANS:  
 $-x^2 - 10xy + 8$   
REF: 011126ia
- 14 ANS:  
 $x^2 - 6x - 6$   
REF: 061226ia
- 15 ANS:  
 $2x^2 - 2x$   
REF: 061322ia
- 16 ANS:  
 $-2x^2 + 12x - 11$   
REF: 011429ia
- 17 ANS:  
 $-3x^2 + 2x$   
REF: 061414ia
- 18 ANS:  
 $-9x^2 + 19x - 5$   
REF: 081428ia
- 19 ANS:  
 $a^2 + 4a - 2$   
REF: spring9805a
- 20 ANS:  
 $-2a^2 + 3a - 6$   
REF: 010019a

- 21 ANS:  
 $3x^2 + 12x - 8$   
REF: 060019a
- 22 ANS:  
 $-x^2 + 9x + 4$   
REF: 080020a
- 23 ANS:  
 $3x^2 + 2x - 6$   
REF: 080209a
- 24 ANS:  
 $-x^2 + 4x - 8$   
REF: 010429a
- 25 ANS:  
 $a^2 + 4a - 2$   
REF: 010619a
- 26 ANS:  
 $x^3 + 2x^2 - 5x + 4$   
REF: 011314a2
- 27 ANS:  
 $5x^2 - 10$   
REF: 061725ai
- 28 ANS:  
 $4x^2 + 10x + 2$   
REF: 080123a
- 29 ANS:  
 $-2x^2 + 6x + 4$   
REF: 011528ai
- 30 ANS:  
 $4x^2 + 8x - 10$   
REF: 010934a
- 31 ANS:  
 $x^2 - \frac{1}{2}x + 5$   
REF: 011114a2

32 ANS:

$$-\frac{1}{4}x^2 + \frac{1}{2}x + 2$$

REF: 061515a2

33 ANS:

$$\frac{-x - 12}{12}$$

REF: 068927siii

34 ANS:

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

REF: 011635a2