

Integrated Algebra - August '09

2 Which expression is equivalent to $9x^2 - 16$?

- (1) $(3x + 4)(3x - 4)$ (3) $(3x + 8)(3x - 8)$
 (2) $(3x - 4)(3x - 4)$ (4) $(3x - 8)(3x - 8)$

3 Which expression represents $(3x^2y^4)(4xy^2)$ in simplest form?

- (1) $12x^2y^8$ (3) $12x^3y^8$
 (2) $12x^2y^6$ (4) $12x^3y^6$

17 What is the sum of $\frac{3}{2x}$ and $\frac{4}{3x}$ expressed in simplest form?

- (1) $\frac{12}{6x^2}$ (3) $\frac{7}{5x}$
 (2) $\frac{17}{6x}$ (4) $\frac{17}{12x}$

22 When $5\sqrt{20}$ is written in simplest radical form, the result is $k\sqrt{5}$. What is the value of k ?

- (1) 20 (3) 7
 (2) 10 (4) 4

23 What is the value of the expression $|-5x + 12|$ when $x = 5$?

- (1) -37 (3) 13
 (2) -13 (4) 37

Integrated Algebra - June '09

3 Which expression represents $\frac{27x^{18}y^5}{9x^6y}$ in simplest form?

- (1) $3x^{12}y^4$ (3) $18x^{12}y^4$
 (2) $3x^3y^5$ (4) $18x^3y^5$

21 Which expression represents $\frac{x^2 - 2x - 15}{x^2 + 3x}$ in simplest form?

- (1) -5 (3) $\frac{-2x - 5}{x}$
 (2) $\frac{x - 5}{x}$ (4) $\frac{-2x - 15}{3x}$

23 When $4x^2 + 7x - 5$ is subtracted from $9x^2 - 2x + 3$, the result is

- (1) $5x^2 + 5x - 2$ (3) $-5x^2 + 5x - 2$
 (2) $5x^2 - 9x + 8$ (4) $-5x^2 + 9x - 8$

29 What is $\frac{6}{4a} - \frac{2}{3a}$ expressed in simplest form?

- (1) $\frac{4}{a}$ (3) $\frac{8}{7a}$
 (2) $\frac{5}{6a}$ (4) $\frac{10}{12a}$

Integrated Algebra - January '09

9 The expression $9x^2 - 100$ is equivalent to

- (1) $(9x - 10)(x + 10)$ (3) $(3x - 100)(3x - 1)$
 (2) $(3x - 10)(3x + 10)$ (4) $(9x - 100)(x + 1)$

21 What is $\frac{6}{5x} - \frac{2}{3x}$ in simplest form?

- (1) $\frac{8}{15x^2}$ (3) $\frac{4}{15x}$
 (2) $\frac{8}{15x}$ (4) $\frac{4}{2x}$

Integrated Algebra - August '08

6 Factored completely, the expression $2x^2 + 10x - 12$ is equivalent to

- (1) $2(x - 6)(x + 1)$ (3) $2(x + 2)(x + 3)$
 (2) $2(x + 6)(x - 1)$ (4) $2(x - 2)(x - 3)$

19 When $3g^2 - 4g + 2$ is subtracted from $7g^2 + 5g - 1$, the difference is

- (1) $-4g^2 - 9g + 3$ (3) $4g^2 + 9g - 3$
 (2) $4g^2 + g + 1$ (4) $10g^2 + g + 1$

21 Which expression represents $\frac{25x - 125}{x^2 - 25}$ in simplest form?

- (1) $\frac{5}{x}$ (3) $\frac{25}{x - 5}$
 (2) $\frac{-5}{x}$ (4) $\frac{25}{x + 5}$

26 What is the product of $\frac{4x}{x - 1}$ and $\frac{x^2 - 1}{3x + 3}$ expressed in simplest form?

- (1) $\frac{4x}{3}$ (3) $\frac{4x^2}{3(x + 1)}$
 (2) $\frac{4x^2}{3}$ (4) $\frac{4(x + 1)}{3}$

27 Which expression is equivalent to $(3x^2)^3$?

- (1) $9x^5$ (3) $27x^5$
 (2) $9x^6$ (4) $27x^6$