

Lesson 4.1 Quiz Form A

1.  $x^5$ ; -32
2.  $10x^4$ ; 160
3.  $-2x^5y^5$ ; -64
4.  $-6x^6y^3$ ; 384
5.  $x^6$
6.  $-8x^9$
7.  $81x^8y^{12}$
8.  $16x^{23}$
9.  $64x^{10}x^{18}$
10.  $x^{3n+45}$

Lesson 4.1 Quiz Form B

1.  $x^7$ ; -1
2.  $6x^6$ ; 6
3.  $2x^5y^3$ ; -16
4.  $-18x^7y^5$ ; 576
5.  $x^8$
6.  $9x^6$
7.  $-8x^6y^{12}$
8.  $-216x^9y^{15}$
9.  $81x^{10}y^{17}$
10.  $x^{5n-6}$

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Lessons 4.2-4.3 Quiz Form A

1.  $7a^2 - 3a; 2$
2.  $9; 0$
3.  $-7a^2 + 13a; 2$
4.  $-3a^2b + 5ab^2 + 10b; 3$
5.  $a^2b^3 + 2ab; 5$
6.  $-8x^2y^2 + 7x^2y + 2xy^2; 4$
7.  $5x^2 - 7x + 6$
8.  $3x^2 - x - 3$
9.  $-3m^5 + 3m^3 + m^2 - 2m + 1$
10.  $6x^2 + 14x - 6$

Lessons 4.2-4.3 Quiz Form B

1.  $7a^2 + a; 2$
2.  $5; 0$
3.  $-10a^2 + 10a; 2$
4.  $-4a^2b + 8ab^2 + 5b; 3$
5.  $a^3b^2 - ab; 5$
6.  $-a^3b^2 + 5ab^2 - ab; 5$
7.  $10x^2 - 9x + 3$
8.  $-x^2 + 2x - 14$
9.  $-2m^4 + 2m^3 - 2m^2 - m + 6$
10.  $3x^2 + 12x + 1$

Lessons 4.4-4.5 Quiz Form A

1.  $3x^2 + 5x + 3$
2.  $4t^2 - 4t + 6$
3.  $2x^4y^2 - 3x^3y^3 + 5x^2y^4$
4.  $-6x^5p + 4x^4p^3 - 10x^3p^2$
5.  $8a^5 + 2a^4 - 6a^3$
6.  $2^2 \times 17$
7.  $2^5 \times 3$
8.  $5a^2$
9.  $3s^2q^4$
10.  $-6x^2y$

Lessons 4.4-4.5 Quiz Form B

1.  $3p^2 - 5p + 7$
2.  $9y^2 + 6y - 14$
3.  $5mn^3 + 3m^2n^3 - 2m^3n^3$
4.  $4x^5y^3 - 8x^4y^4 + 16x^3y^5 - 4x^2y^6$
5.  $19a^5 - 12a^4 + 6a^3 - 4a^2$
6.  $2^2 \times 3 \times 7$
7.  $2^2 \times 23$
8.  $y^5$
9.  $5x^{10}$
10.  $-4x^3y$

Lesson 4.6 Quiz Form A

1.  $5(p^2 - 5p + 2)$
2.  $2(x^3 + 4x^2 - 3)$
3.  $2m(2m^2 - 3m + 1 + 4x)$
4.  $5a^2(a^5 - 4a^2 + 2)$
5.  $x^2(26x^2 + 13x - 7)$
6.  $m^2 - 9$
7.  $5x^6y^3 - 2x^6y^4 + 3x^4y^6$
8.  $7x^3y^3 - 13x^2y^4$

Lesson 4.6 Quiz Form B

1.  $3(x^2 - 3x + 2)$
2.  $y(6y^2 + 3y + 2)$
3.  $5p(p^3 + 2p^2 + p - 3)$
4.  $a^2(12a^3 - 6a + 5)$
5.  $4x^4(4x^4 + 3x^2 - 2)$
6.  $3s^2 + 3s + 4$
7.  $6x^3y^2 - 10x^2y^3 - 10x^2y^4 + 2xy^3$
8.  $-4a^4b^4 - 18a^3b^5$

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Unit 4 Test Form A

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|---|-------------------|
| 1. $3a^2 - 2a + 4$                                    | 21. prime         |
| 2. $2b^3 + b^2 - 2b - 2$                              | 22. $x^4$         |
| 3. $-x^5 - 2x^3 + 4x^2 - 2$                           | 23. $5x^5y^2$     |
| 4. 4  | 24. $-6a^2b^3c^2$ |
| 5. $x^6y^9z^3$  | 25. $x = 1$       |
| 6. $18p^3$  |                   |
| 7. $12a^3b^4c^4$                                      |                   |
| 8. $10x^8$  |                   |
| 9. $8x^6y^9z^{12}$                                    |                   |
| 10. $9y^3 - y^2 - 9y$                                 |                   |
| 11. $12x^5 - 18x^4 + 6x^3 + 15x^2$                    |                   |
| 12. $-8m^5n^3 + 4m^4n^4 - 16m^3n^5 + 12m^2n^5$        |                   |
| 13. $6x^4y^2z^2 + 4x^2y^3z^4 + 8x^2y^2z^3 - 6x^2yz^4$ |                   |
| 14. $3p^3 + 2p^2 + 3p + 1$                            |                   |
| 15. $5y^3 - 2y^2 - 1$                                 |                   |
| 16. $4x^3 + x^2 - 2x + 6$                             |                   |
| 17. $2 \cdot 3 \cdot 3 \cdot 3$ or $2 \cdot 3^3$      |                   |
| 18. $-12a^4 = -192$                                   |                   |
| 19. $2(p^2 - 3p + 6)$                                 |                   |
| 20. $5s(s^2 - 2s - 5)$                                |                   |

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Unit 4 Test Form B

1.  $2x^2 + 3x + 1$
2.  $2y^3 - 5y^2 + 8y - 4$
3.  $-2a^5 - 2a^4 + a^2 - a$
4. 5
5.  $a^4b^6c^4$
6.  $12y^5$
7.  $30m^3n^2p^2$
8.  $-18y^6$
9.  $64x^{15}y^6z^9$
10.  $-6x^2 - 5x + 9$
11.  $-6y^5 - 6y^4 + 2y^3 - 2y^2$
12.  $10a^4b^2 - 15a^3b^3 + 5a^2b^4 - 20ab^4$
13.  $-6x^4y^3z^3 - 4x^3y^3z^2 + 10x^2y^2z^2$
14.  $4s^3 - 5s^2 - s + 1$
15.  $x^2 - 8x + 4$
16.  $2y^3 + 2y^2 - 2y + 2$
17.  $2 \cdot 2 \cdot 2 \cdot 3 \cdot 3$  or  $2^3 \cdot 3^2$
18.  $35x^4 = 2835$
19.  $3(y^2 + y - 2)$
20.  $2x(3x^2 - x + 5)$
21.  $3a(-6a^2 + a + 4)$
22.  $y^5$
23.  $-4x^3y$
24.  $-4x^3z^2$
25.  $y = 6$

Lessons 5.1-5.2 Quiz Form A

1.  $8x^2 + 3x - 15$
2.  $2x^2 - 6x - 56$
3.  $2x^3 - 9x^2 + 4x - 15$
4.  $x^2 + 4x + 4$
5.  $4x^2 - 12x + 9$
6.  $(x + 4)(x + 3)$
7.  $(x - 4)(x - 2)$
8.  $(x - 6)(x + 4)$
9.  $(m + 8)(m - 2)$
10.  $(a^2 + 11)(a^2 - 8)$

Lessons 5.1-5.2 Quiz Form B

1.  $15x^2 + 18x - 24$
2.  $2y^2 - 9y - 56$
3.  $3t^3 - 12t^2 + 20t - 16$
4.  $x^2 - 6x + 9$
5.  $9x^2 + 12x + 4$
6.  $(x - 4)(x + 3)$
7.  $(x - 5)(x - 5)$  or  $(x - 5)^2$
8.  $(g - 15)(g + 4)$
9.  $(m + 11)(m - 3)$
10.  $(r^2 - 9)(r^2 + 4)$

Lessons 5.3-5.4 Quiz Form A

1.  $2(x - 1)(3x - 1)$
2.  $2(x - 2)(2x + 5)$
3.  $2(2x + 1)(5x + 4)$
4.  $(x - 6)(x + 6)$
5.  $(4x - 9)(4x + 9)$
6.  $(x - 5)(x - 5)$  or  $(x - 5)^2$
7.  $(2x + 3)(2x + 3)$  or  $(2x + 3)^2$
8.  $3(2a + r)(2a - r)$
9.  $5(4m + 5t)(m + t)$
10.  $4x(3x - 2y)(3x + 2y)$

Lessons 5.3-5.4 Quiz Form B

1.  $2(2x + 3)(x + 2)$
2.  $2(3x - 2)(x - 2)$
3.  $(4x + 5)(3x - 4)$
4.  $(x - 7)(x + 7)$
5.  $(5x - 8)(5x + 8)$
6.  $(x + 6)^2$
7.  $(3x - 4)^2$
8.  $2(5m + t)(5m - t)$
9.  $3(3x + 3y)(2x - 5y)$
10.  $5a(5a + 4b)(5a - 4b)$



Lesson 5.5 Quiz Form A

1.  $6x(x - 1)(x + 1)$
2.  $3(a + 7)(a + 2)$
3.  $4y(3y + 5)(y + 2)$
4.  $3x(3x - 5y)(3x + 5y)$
5.  $2x(x - 4y)(x + 20y)$

Lesson 5.5 Quiz Form B

1.  $3(x + 1)(x + 2)$
2.  $2y(2x + 3)(4x + 5)$
3.  $(7x - 6b)(7x + 6b)$
4.  $(3x + 4y)(2x - 3y)$
5.  $c(a - 2b)(a + 2b)(a - 2b)(a + 2b)$  or  $c(a - 2b)^2(a + 2b)^2$

Lessons 5.6-5.7 Quiz Form A

1.  $(x - y)(3 + g)$
2.  $(m + b)(y - 5)(y + 5)$
3.  $x = 5$  or  $x = -4$
4.  $x = 16$  or  $x = -4$
5.  $x = -\frac{5}{4}$  or  $x = -1$
6.  $x + 8 = 15$ ,  $x = 7$
7.  $4x - 2 = 2(x + 6)$ ,  $x = 7$

Lessons 5.6-5.7 Quiz Form B

1.  $(x + 8)(y + c)$
2.  $(d + 4)(d - a)$
3.  $x = 6$  or  $x = -4$
4.  $x = -11$  or  $x = 4$
5.  $x = -\frac{5}{6}$  or  $x = 3$
6.  $3x - 1 = 2x + 2$ ,  $x = 3$
7.  $8x - 4 = x + 10$ ,  $x = 2$

Lesson 5.8 Quiz Form A

1.  $x + x + 1 + x + 2 = 90$ , 29, 30, 31
2.  $(x + 2)^2 - 2x = 39$ , -7, -5 or 7, 5
3.  $x(x + 2) = 7(x + 4) - 4$   $\leftrightarrow$  8, 10, 12
4.  $x(x + 2) = 7(x + 4) - 4$   $\leftrightarrow$  -3, -1, 1
5.  $(x + 2)^2 - x^2 = 8$   $\leftrightarrow$  1, 2, 3

Lesson 5.8 Quiz Form B

1.  $x + x + 2 + x + 4 = 234$   $\leftrightarrow$  76, 78, 80
2.  $x^2 + (x + 2)^2 = 74$   $\leftrightarrow$  5, 7 or -7, -5
3.  $x(x + 1) - (x + 2)^2 = 14$   $\leftrightarrow$  -6, -5, -4
4.  $x(x + 4) = 2x + 3$   $\leftrightarrow$  -3, -1, 1 or 1, 3, 5
5.  $(x + 2)^2 - x^2 = 12$   $\leftrightarrow$  2, 3, 4

Unit 5 Test Form A

1.  $4x^2 - 25$
2.  $12b^2 + 17bc - 5c^2$
3.  $3a^3 - 5a^2 + 13a + 5$
4.  $25n^2 - 30n + 9$
5.  $(b + 5)(b - 4)$
6.  $(2x + 1)(x + 3)$
7.  $(2p - 3)(2p + 1)$
8.  $(2m - 5)(2m + 5)$
9.  $2a(a + 1)(a - 2)$
10.  $e^2(15e - 14)(15e + 14)$
11.  $(3r + s)(r - 2s)$
12.  $2cd^2(5c + 2d)(c - d)$
13.  $(x + y)(m - b)$
14.  $(4f + 3g)(2f - 7x)$
15.  $x = 4, x = 2$
16.  $y = -5, y = 1$
17.  $a = 0, a = 4, a = -4$
18.  $b = 0, b = -3, b = \frac{7}{2}$
19.  $g = 0, g = -17$
20.  $b = 6, b = -6$
21.  $x = -\frac{7}{5}, x = \frac{11}{3}$
22.  $x = -3$
23.  $x + x + 1 = 35; 17, 18$
24.  $x(x + 2) = 24; -6, -4$  or  $4, 6$
25.  $x + 1 + x + 2 = 3x; 3, 4, 5$

Unit 5 Test Form B

1.  $9x^2 - 16$
2.  $2b^2 - 3bc - 14c^2$
3.  $4a^3 - 17a^2 + 21a + 27$
4.  $49n^2 + 56n + 16$
5.  $(m - 3)(m - 6)$
6.  $(3a - 1)(a + 2)$
7.  $(4r - 5)(2r - 1)$
8.  $(17 - 7b)(17 + 7b)$
9.  $3p(p - 4)(p - 3)$
10.  $2x^2(x^2 - 17)(x^2 + 17)$
11.  $(t - 4w)(t + 4w)$
12.  $ef(e + 4f)(3e - 2f)$
13.  $(2c - 1)(d + e)$
14.  $(3t + x)(x + a)$
15.  $m = \frac{1}{3}, m = -4$
16.  $n = \frac{3}{2}, n = -\frac{1}{2}$
17.  $b = 0, b = 1, b = -1$
18.  $a = 0, a = \frac{2}{3}, a = \frac{3}{2}$
19.  $g = 5, g = -2$
20.  $b = 7, b = -7$
21.  $m = -\frac{9}{4}, m = 3$
22.  $x = 3, x = -3$
23.  $8x - 15 = x^2; 3, 5$
24.  $x + x + 2 + x + 4 = 36;$   
 $10, 12, 14$
25.  $x(x + 2) = 48; 6, 8 \text{ or } -6, -8$

Lessons 6.1-6.2 Quiz Form A

1.  $x = 3$
2.  $t = -6$  or  $-2$
3.  $\frac{12x^2 + 34x + 20}{5x - 3}$
4.  $\frac{x - 6}{3x - 1}$
5.  $\frac{3x + 4}{4x + 5}$

Lessons 6.1-6.2 Quiz Form B

1.  $3$  or  $-3$
2.  $x = -\frac{1}{2}$  or  $5$
3.  $\frac{8a^2 + 14a - 15}{24a^2 - 22a - 35}$
4.  $\frac{2b + 3}{b - 4}$
5.  $\frac{x + 2}{3x - 5}$

Lessons 6.3-6.4 Quiz Form A

1.  $-\frac{3}{b-2}$

2.  $-\frac{x-4}{2x-3}$

3.  $\frac{3a-2}{a}$

4.  $\frac{2x+3}{3x+2}$

5.  $\frac{3x+4}{3(5x+2)}$

6.  $\frac{4x^2}{y^2}$

7.  $\frac{a^2b^2-1}{a}$

8.  $\frac{-2}{m^2(r+4)}$

Lessons 6.3-6.4 Quiz Form B

1.  $\frac{x-y}{x-4y}$

2.  $-\frac{x-4}{x-1}$

3.  $-\frac{2a-5}{a-6}$

4.  $-\frac{m-1}{m(m+3)}$

5.  $-\frac{3r-2}{3r-4}$

6.  $\frac{5y^4}{6x^5}$

7.  $\frac{a^3}{2b^7}$

8.  $-\frac{x^2(x-5)}{x+2}$

Lessons 6.5-6.6 Quiz Form A

1.  $\frac{a+2}{a-4}$

2.  $-\frac{2}{x+1}$

3.  $-\frac{6a^2}{b^6}$

4.  $\frac{a-4}{2(a+2)}$

5. 1

Lessons 6.5-6.6 Quiz Form B

1. 1

2.  $-\frac{3(x-5)}{2(x-3)}$

3. -3

4.  $\frac{b-2}{b}$

5.  $\frac{1}{3a}$



Lessons 6.7-6.8 Quiz Form A

1.  $6m^2$
2.  $6r^2 - 14r$
3.  $-3x^5 + 2x^2 - 4x + 1$
4.  $2m + 5$
5.  $3x^2 + 6x + 1, R 5$
6.  $3x^2 - 2x - 3, R -13$

Lessons 6.7-6.8 Quiz Form B

1.  $-6x^3$
2.  $8m^3 - 4m$
3.  $-4x^4 + x^3 + 9x - 5$
4.  $4x + 1, R -13$
5.  $2m^2 - 6m - 8$
6.  $6x^2 + 3x + 4, R 6$

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Unit 6 Test Form A

1.  $\frac{7x + 21}{2x - 5}$

2.  $\frac{2p^2 + p - 15}{5p + 8}$

3. -5, 4

4.  $\frac{x + 5}{3x}$

5.  $\frac{a - 4}{2a - 3}$  or  $\frac{4 - a}{2a - 3}$

6.  $\frac{2y + 7}{y + 4}$

7.  $-\frac{3k - 2}{k}$

8.  $-\frac{3y + 2}{y - 6}$

9.  $\frac{5x^2}{y^6}$

10.  $\frac{q^2}{h - 1}$

11.  $\frac{y - 4}{y^2(y - 6y)}$

12.  $\frac{15}{a}$

13.  $\frac{a - 7}{a - 4}$

14.  $-\frac{x(4x + 5)}{4(x + 1)}$

15.  $-\frac{1}{4(a + 2)}$

16.  $-\frac{z + 1}{6z(z - 1)}$

17.  $\frac{5(2b + 3)}{2b(b + 9)}$

**Tests****Answers****Unit 6**

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Unit 6 Test Form B

1.  $\frac{8x + 32}{2x - 5}$

2.  $\frac{a^2 + 2a - 24}{3a + 2}$

3. -6 or 4

4.  $\frac{y - 3}{3y}$

5.  $\frac{x - 4}{x - 5}$

6.  $\frac{b + 6}{2b + 7}$

7.  $\frac{3 - 2k}{k}$

8.  $\frac{3a + 2}{3a - 2}$

9.  $2x^7y$

10.  $\frac{r^4}{k - 1}$

11.  $\frac{b(b^3 - 7b + 14)}{(b^2 - 10b + 20)}$

12.  $\frac{a - 7}{a - 4}$

13.  $\frac{15}{a}$

14.  $-\frac{z + 1}{6z(z - 1)}$

15.  $\frac{5(2b + 3)}{2b(b + 9)}$

16.  $-\frac{1}{4(a + 2)}$

17.  $-\frac{x(4x + 5)}{4(x + 1)}$

Lesson 7.1 Quiz Form A

1.  $\frac{3x}{5}$

2.  $\frac{2}{(x+1)}$

3.  $\frac{7a+20}{12a}$

4.  $2m$

5.  $\frac{25x-1}{12x}$

Lesson 7.1 Quiz Form B

1.  $\frac{2x}{3}$

2.  $\frac{2x}{x+4}$

3.  $\frac{19a+14}{20a}$

4.  $\frac{41x}{20}$

5.  $\frac{78x-17}{30x}$

Lessons 7.2-7.3 Quiz Form A

1.  $\frac{a+3}{a}$

2.  $\frac{m+2}{m}$

3.  $\frac{4r^2 + 29r - 7}{r(r+7)(r-7)}$

4.  $\frac{8x^2 + 2x + 3}{x^2}$

5.  $\frac{3m^2 + 11m - 13}{3m - 4}$

Lessons 7.2-7.3 Quiz Form B

1.  $\frac{x+5}{x}$

2.  $\frac{4}{a}$

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

4.  $\frac{6a^2 + 4a + 3}{a^2}$

5.  $\frac{10m^2 - 18m - 2}{2m - 3}$

Lessons 7.4-7.5 Quiz Form A

1.  $\frac{2x - 11}{x - 2}$

2.  $\frac{2(x + 10)}{x(x - 5)}$

3.  $\frac{-3m + 2}{(m + 3)(m - 2)(m - 4)}$  or  $\frac{2 - 3m}{(m + 3)(m - 2)(m - 4)}$

4.  $\frac{r}{r - 4}$

5.  $\frac{6x - 6}{x^2 - 2x}$  or  $\frac{6(x - 1)}{x(x - 2)}$

Lessons 7.4-7.5 Quiz Form B

1.  $\frac{7a + 1}{2a}$

2.  $\frac{1}{x - 2}$

3.  $\frac{2m - 5}{(m - 4)(m + 2)(m - 1)}$

4.  $\frac{-11}{(a - 6)(a + 5)}$

5.  $\frac{8x + 10}{(x - 2)(x + 8)}$  or  $\frac{2(4x + 5)}{(x - 2)(x + 8)}$

Lessons 7.6-7.7 Quiz Form A

1.  $\frac{x + 10}{x + 6}$

2.  $\frac{3(6 - x^2)}{2(3 + x^2)}$

3.  $\frac{2(3x - 7)}{x + 2}$

4.  $\frac{4x - 29}{2x - 15}$

5.  $\frac{1}{4}$

Lessons 7.6-7.7 Quiz Form B

1.  $\frac{33x}{16x + 72}$

2.  $\frac{4}{3}$

3.  $\frac{5}{2}$

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

5.  $\frac{1}{3}$

Unit 7 Test Form A

1.  $\frac{1}{3}$

2.  $\frac{1}{a-5}$

3.  $\frac{41x+7}{8x}$

4.  $\frac{1}{r}$

5.  $\frac{5m+9}{4(m+1)}$

6.  $\frac{a+3}{2a+1}$

7.  $\frac{3y^2+17y-5}{y+5}$

8.  $\frac{5r^2+5r+2}{r^2}$

9.  $\frac{53x+1}{5x}$

10.  $\frac{2}{d+3}$

11.  $\frac{-2}{a-8}$  or  $\frac{2}{8-a}$

12.  $\frac{4}{x+2}$

13.  $\frac{3m}{m-3}$

14.  $\frac{7}{k}$



15.  $\frac{9}{10x - 4}$

16.  $\frac{c + 3}{c - 4}$

17. 2

18.  $8n$

19. 1

20.  $\frac{a}{a + 7}$

Unit 7 Test Form B

1. 3

2.  $\frac{1}{r-3}$

3.  $\frac{20x-7}{6x}$

4.  $\frac{4}{m}$

5.  $\frac{2}{a-4}$

6.  $\frac{(3y+1)(y+2)}{(y-2)(y-5)(y+5)}$

7.  $\frac{2r^2+r-10}{2r-5}$

8.  $\frac{9p^2+7p+3}{p^2}$

9.  $\frac{3m+2}{2m}$

10.  $\frac{2}{d+4}$

11.  $\frac{7}{c}$

12.  $\frac{x-2}{x-4}$

13.  $\frac{11r}{r-5}$

14.  $\frac{x+5}{x-4}$

15.  $\frac{1}{6m - 10}$

16.  $\frac{a + 1}{a}$

17. 2

18.  $9x$

19.  $\frac{k + c}{c}$

20.  $\frac{q + 7}{q}$

