

Algebra Review 2

Foil:

1. $(6z-2)(3z+4)$

2. $(8b-3)(b+5)$

Simplify:

3. $\frac{z^2 + 10z + 25}{z^2 - 25}$

4. $\frac{b^2 + 24b + 144}{b^2 - 144}$

5. $\frac{7}{z} + \frac{1}{3z}$

6. $\frac{11}{b} + \frac{2}{5b}$

7. $\left(\frac{9z}{6}\right)^2$

8. $\left(\frac{25b}{5}\right)^2$

Solve:

9. $7(z - 5) + 2 = 3z$

10. $3(b - 4) + 10 = 7b$

11. $16y^2 - 48y + 36$

Factor:

12. $y^2 + 14y + 49$

Solve:

13. $-3y + 8 = 1$

Factor:

14. $16y^2 - 14y - 15$

Simplify:

15. $14b - 9z - 24b + 10z$

16. $5x + 13y - x + 3y$

Solve

17. $5z + 3 = 9$

Factor

18. $12y^2 - 29y + 15$

Simplify

19. $\frac{b}{3x} \div \frac{3x}{b}$

20. $(y + 7)^2$

21. $\frac{-49b}{35b}$

Simplify:

$$22. \frac{60z}{144z}$$

$$23. (4y - 6)^2$$

$$24. (2b^3z)^3$$

$$25. (9x^3y^5)^2$$

$$26. \left(\frac{25b^2}{16z}\right)\left(\frac{8z}{5b}\right)$$

$$27. \left(\frac{60x}{3y^2}\right)\left(\frac{81y}{12x^2}\right)$$

$$28. (b^2 + z^3)^2$$

$$29. (x + y^2)^2$$

$$30. 5(3x-1) = 12$$

$$31. 4(7b + 2) = 9$$

Solve:

$$32. \frac{b^2}{a+b} \text{ if } b = 6 \text{ } a = 1$$

$$33. \frac{x^2}{x+y} \text{ if } x = -2 \text{ } y = 3$$

Simplify:

$$34. \frac{4b}{2} - \frac{2b}{3} + \frac{b}{6}$$

$$35. \frac{5x}{9} - \frac{4x}{18} + \frac{5x}{6}$$

Answers to Algebra Review 2

Check your answers. If they do not match, try re-working the problem.

Tutorials are available for additional assistances.

Bring your work to the Math Center with specific questions.

1. $18z^2 + 18z - 8$

- <http://patrickjmt.com/solving-quadratic-equations-by-factoring-basic-examples/>
- <http://www.yourteacher.com/free-video-jwp.php?vid=7070>
- <http://www.youtube.com/watch?v=65BAsV0SK3k&feature=relmfu>

2. $8b^2 + 37b - 15$

- <http://patrickjmt.com/solving-quadratic-equations-by-factoring-basic-examples/>
- <http://www.yourteacher.com/free-video-jwp.php?vid=7070>
- <http://www.youtube.com/watch?v=65BAsV0SK3k&feature=relmfu>

3. $\frac{z + 5}{z - 5}$

- <http://www.youtube.com/watch?v=jyJFGZUmUsg>

4. $\frac{b + 12}{b - 12}$

- <http://www.youtube.com/watch?v=jyJFGZUmUsg>

5. $\frac{22}{3z}$

- <http://www.youtube.com/watch?v=jyJFGZUmUsg>

6. $\frac{57}{5b}$

- <http://www.youtube.com/watch?v=jyJFGZUmUsg>

7. $\frac{9z^2}{4}$

- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-1/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-2/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-3/>

8. $25b^2$

- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-1/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-2/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-3/>

9. $\frac{33}{4}$

- <http://www.youtube.com/watch?v=9teKXGoWlQM&feature=relmfu>
- <http://www.youtube.com/watch?v=XfaWLVLeJM&feature=relmfu>

10. $b = -.5$

- <http://www.youtube.com/watch?v=9teKXGoWlQM&feature=relmfu>
- <http://www.youtube.com/watch?v=XfaWLVLeJM&feature=relmfu>

11. $4(2y-3)(2y-3)$

- <http://www.youtube.com/user/yourteachermathhelp#p/search/1/Nj9GgAM-dTQ>

12. $(y+7)(y+7)$

- <http://www.youtube.com/user/yourteachermathhelp#p/search/1/Nj9GgAM-dTQ>

13. $y = \frac{7}{3}$

- <http://www.youtube.com/watch?v=Zj-9Zc9yKYU>

14. $(8y + 5)(2y - 3)$

- <http://www.youtube.com/user/yourteachermathhelp#p/search/1/Nj9GgAM-dTQ>

15. $-10b + z'$

- <http://patrickjmt.com/polynomials-adding-subtracting-multiplying-and-simplifying-ex-1/>
- <http://patrickjmt.com/polynomials-adding-subtracting-multiplying-and-simplifying-ex-2/>
- <http://patrickjmt.com/polynomials-adding-subtracting-multiplying-and-simplifying-ex-3/>

17. $z = 6/5$

<http://www.youtube.com/watch?v=Zj-9Zc9yKYU>

19. $\frac{b^2}{9x^2}$

- <http://www.youtube.com/watch?v=Xdo4uQdbPWU&feature=related>

21. $-7/5$

- <http://www.youtube.com/watch?v=Ctdo pjom3ll>

23. $16y^2 - 48y + 36$

- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-1/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-2/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-3/>

25. $81x^6y^{10}$

- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-1/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-2/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-3/>

27. $135/xy$

- <http://www.youtube.com/watch?v=4GHL2P6YMcc>

16. $4x + 16y$

- <http://patrickjmt.com/polynomials-adding-subtracting-multiplying-and-simplifying-ex-1/>
- <http://patrickjmt.com/polynomials-adding-subtracting-multiplying-and-simplifying-ex-2/>
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18. $(3y-5)(4y-3)$

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20. $y^2 + 14y + 49$

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- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-3/>

22. $\frac{5}{12}$

- <http://www.youtube.com/watch?v=Ctdo pjom3ll>

24. $8b^9z^3$

- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-1/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-2/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-3/>

26. $5b/2$

- <http://www.youtube.com/watch?v=4GHL2P6YMcc>

28. $b^4 + 2b^2z^3 + z^6$

- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-1/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-2/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-3/>

29. $x^2 + 2xy^2 + y^4$

- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-1/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-2/>
- <http://patrickjmt.com/exponents-applying-the-rules-of-exponents-basic-ex-3/>

31. $b = 1/28$

- <http://www.youtube.com/watch?v=9teKXGoWlQM&feature=relmfu>
- <http://www.youtube.com/watch?v=XfaWLVLFfeJM&feature=relmfu>

33. 4

- <http://www.youtube.com/watch?v=hmalVzYEbUU>

35. $7x/6$

- <http://www.youtube.com/watch?v=aOajaL8bUjo>

30. $x = 17/15$

- <http://www.youtube.com/watch?v=9teKXGoWlQM&feature=relmfu>
- <http://www.youtube.com/watch?v=XfaWLVLFfeJM&feature=relmfu>

32. $36/7$

- <http://www.youtube.com/watch?v=hmalVzYEbUU>

34. $3b/2$

- <http://www.youtube.com/watch?v=aOajaL8bUjo>