

Los Angeles Southwest College

Mathematics Department

Math 112 – Common Final Exam

Study Guide

SPRING 2010

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Chapter 1

1. Divide. $\frac{76}{0}$
2. Divide. $277 \div 5$
3. Divide. $699 \div 3$
4. Divide. $127,000 \div 100$
5. Write a related multiplication sentence. $18 \div 3$
6. Write a related multiplication sentence. $72 \div 9$
7. Write a related multiplication sentence. $54 \div 6$
8. Write two related division sentence. $9 \cdot 5 = 42$
9. Write two related division sentence. $2 \cdot 7 = 42$
10. Write two related division sentence. $4 \cdot 12 = 48$
11. Solve. Be sure to check. $13 + x = 42$
12. Solve. Be sure to check. $15 + t = 22$
13. Solve. Be sure to check. $12 = 12 + m$
14. Solve. Be sure to check. $3 \cdot x = 24$
15. Solve. Be sure to check. $6x = 42$
16. Solve. Be sure to check. $p = 908 - 458$
17. Solve. Be sure to check. $9007 - 5667 = m$
18. Solve. Be sure to check. $t = 125 \div 5$
19. Solve. Be sure to check. $w = 256 \div 16$
20. Solve. Be sure to check. $10,534 \div 458 = q$
21. Evaluate. 7^2
22. Evaluate. 5^3
23. Evaluate. 9^3

24. Evaluate. 11^2
25. Simplify. $12 + (6 + 4)$
26. Simplify. $(12 + 6) + 18$
27. Simplify. $52 - (40 - 8)$
28. Simplify. $(52 - 40) - 8$
29. Simplify. $1000 \div (100 \div 10)$
30. Simplify. $(1000 \div 100) \div 10$
31. Simplify. $7 \cdot (10 - 3)^2 - 2 \cdot (3 + 1)^2$
32. Simplify. $4^2 + 8^2 + 2^2$
33. Simplify. $7^2 + 20 \cdot 4 - (28 + 9 \cdot 2)$
34. Simplify. $8 \cdot 9 - (12 - 8) \div 4 - (10 - 7)$
35. Simplify. $120 - 3^3 \cdot 4 \div (5 \cdot 6 - 6 \cdot 4)$
36. Simplify. $80 - 2^4 \cdot 15 \div (7 \cdot 5 - 45 \div 3)$
37. Simplify. $8 \cdot 13 + \{42 \div [18 - (6 + 5)]\}$
38. Simplify. $72 \div 6 - \{2 \cdot [9 - (4 \cdot 2)]\}$
39. Simplify. $[14 - (3 + 5) \div 2] - [18 \div (8 - 2)]$
40. Simplify. $[92 \cdot (6 - 4) \div 8] + [7 \cdot (8 - 3)]$

41. Natasha has \$196 and wants to buy a computer workstation for \$698. How much more does she need?

42. A beverage company packed 228 cans of soda into 12-can cartons. How many cartons did they fill?

43. An apartment builder bought 13 gas stoves at \$425 each and 13 refrigerators at \$620 each. What was the total cost?

44. A sack of oranges weighs 27 lb. A sack of apples weighs 32 lb. Find the total weight of 16 bags of oranges and 43 bags of apples.

45. Find the average of 97, 98, 87, and 86.

Chapter 2

1. Subtract. $2 - 7$
2. Subtract. $3 - 8$
3. Subtract. $8 - (-3)$
4. Subtract. $-7 - 4$
5. Subtract. $-6 - (-5)$
6. Subtract. $-4 - (-3)$
7. Subtract. $8 - (-10)$
8. Subtract. $5 - (-6)$
9. Simplify. $5 - (-30) + 30 + 40 - (-12)$
10. Simplify. $81 - (-20) - 14 - (-50) + 53$
11. Simplify. $-3 + 7 + (-8)$
12. Simplify. $8 - (-9) - 7 + 2$
13. Multiply. $(-6)(-7)$
14. Multiply. $-8 \cdot (-3)$
15. Multiply. $15 \cdot (-8)$
16. Multiply. $19(-7)(-8) \cdot 0 \cdot 6$
17. Multiply. $(-7)(-1)(7)(-6)$
18. Multiply. $(-6)6(-4)5$
19. Simplify. $(-6)^2$
20. Simplify. $(-1)^5$
21. Simplify. -2^4

22. Simplify. $(-1)^{18}$
23. Simplify. $(-2)^4$
24. Simplify. $(-3)^5$
25. Divide. $28 \div (-4)$
26. Divide. $-22 \div (-2)$
27. Divide. $-100 \div (-50)$
28. Divide. $128 \div 8$
29. Simplify. $20 \div 5(-3) + 3$
30. Simplify. $14 \div 2(-6) + 7$
31. Simplify. $17 - 10^3$
32. Simplify. $30 + (-5)^3$
33. Simplify. $8 - |7 - 9| \cdot 3$
34. Simplify. $|8 - 7 - 9| \cdot 2 + 1$
35. Simplify. $\frac{6^3 - 7 \cdot 3^4 - 2^5 \cdot 9}{(1 - 2^3)^3 + 7^3}$
36. Simplify. $\frac{4 \div 2 \cdot 4^2 - 3 \cdot 2}{(7 - 4)^3 - 2 \cdot 5 - 4}$
37. Simplify. $\frac{(-5)^3 + 17}{10(2 - 6) - 2(5 + 2)}$
38. Simplify. $\frac{(3 - 5)^2 - (7 - 13)}{(2 - 5) \cdot 3 + 2 \cdot 4}$
39. Evaluate. $3(a + b)$, for $a = 2$ and $b = -4$
40. Evaluate. $\frac{49t^2}{10}$, for $t = 10$

41. Evaluate. $\frac{5(F-32)}{9}$, for $F = 50$
42. Evaluate. $a^6 - a$, for $a = -2$
43. Write two equivalent expressions with negative signs in different places. $\frac{-x}{5}$
44. Write two equivalent expressions with negative signs in different places. $\frac{-14}{y}$
45. Use the distributive law. $4(1 - y)$
46. Use the distributive law. $-6(5x - 2)$
47. Use the distributive law. $-5(9x - y + 8z)$
48. Use the distributive law. $(4a - 5b + c - 29)5$
49. Combine like term. $9 + 5t + 7y - t - y - 13$
50. Combine like term. $8 - 4a + 9b + 7a - 3b - 15$
51. Combine like term. $3a^2 + 7a^3 - a^2 + 5 + a^3$
52. Combine like term. $x^3 - 5x^2 + 2x^3 - 3x^2 + 4$
53. Combine like term. $9x^3y + 4xy^3 - 6xy^3 + 3xy$
54. Combine like term. $3x^4 - 2y^4 + 8x^4y^4 - 7x^4 + 8y^4$
55. Combine like term. $3a^6 - 9b^4 + 2a^6b^4 - 7a^6 - 2b^4$
56. Combine like term. $9x^6 - 5y^5 + 3x^6y - 8x^6 + 4y^5$
57. Solve. $-7x - 4 = -46$
58. Solve. $-x - 6 = 8$
59. Solve. $9 = 4x - 7$
60. Solve. $33 = 5 - 4x$
61. Solve. $13 = 5 - x$
62. Solve. $18 = 4 - 2x$

63. Solve. $6a + 1 = -17$
64. Solve. $-2x + 1 = 17$
65. Solve. $-x + 9 = -15$
66. Solve. $13 = 3 + 2x$
67. Find the perimeter of a rectangular 8-ft by 10-ft bedroom.
68. Find the perimeter of a rectangular 3-ft by 4-ft doghouse.
69. Find the perimeter of a square skylight that is 2 m on each side.
70. Find the perimeter of a 12-ft by 20-ft rectangular deck.

Chapter 3.

1. Find the prime factorization of each number. 110
2. Find the prime factorization of each number. 273
3. Find the prime factorization of each number. 78
4. Find the prime factorization of each number. 1122
5. Multiply. Don't forget to simplify. $\frac{3}{8} \cdot \frac{7}{3}$
6. Multiply. Don't forget to simplify. $-4 \cdot \frac{-5}{7}$
7. Multiply. Don't forget to simplify. $\frac{9}{-5} \cdot \frac{12}{8}$
8. Multiply. Don't forget to simplify. $\frac{1}{4} \cdot 12$
9. Multiply. Don't forget to simplify. $-16 \cdot \left(-\frac{3}{4}\right)$
10. Multiply. Don't forget to simplify. $\left(-\frac{3}{8}\right) \cdot \left(-\frac{8}{3}\right)$
11. Multiply. Don't forget to simplify. $\frac{1}{26} \cdot 143a$

12. Multiply. Don't forget to simplify.

$$\frac{7}{10} \cdot \frac{34}{150}$$

13. Multiply. Don't forget to simplify.

$$\frac{-98}{99} \cdot \frac{27a}{175a}$$

14. Multiply. Don't forget to simplify.

$$\left(-\frac{11}{24}\right) \cdot \frac{3}{5}$$

15. Divide. Don't forget to simplify.

$$\frac{12}{7} \div 4x$$

16. Divide. Don't forget to simplify.

$$\left(-\frac{10}{21}\right) \div \left(-\frac{2}{15}\right)$$

17. Divide. Don't forget to simplify.

$$120a \div \frac{45}{14}$$

18. Divide. Don't forget to simplify.

$$360a \div \frac{27n}{8}$$

19. Divide. Don't forget to simplify.

$$\frac{\frac{7}{20}}{\frac{8}{5}}$$

20. Divide. Don't forget to simplify.

$$\frac{\frac{8}{21}}{\frac{6}{5}}$$

21. Divide. Don't forget to simplify.

$$\frac{\frac{15}{8}}{\frac{9}{10}}$$

22. Divide. Don't forget to simplify.

$$\frac{\frac{27}{10}}{\frac{21}{20}}$$

23. Divide. Don't forget to simplify.

$$\frac{\frac{9}{16}}{\frac{6}{5}}$$

24. Divide. Don't forget to simplify.
$$\frac{-\frac{35}{18}}{-\frac{14}{27}}$$
25. Simplify.
$$\frac{\frac{5}{8} + \frac{2}{3}}{\frac{7}{3} - \frac{1}{4}}$$
26. Simplify.
$$\frac{\frac{6}{2} - \frac{1}{5}}{\frac{5}{5} + \frac{9}{3}}$$
27. Simplify.
$$\frac{\frac{2}{3} - \frac{1}{6}}{\frac{1}{4} + \frac{2}{5}}$$
28. Solve. Don't forget to simplify.
$$\frac{4}{5}x = 12$$
29. Solve. Don't forget to simplify.
$$\frac{2}{9}x = -10$$
30. Solve. Don't forget to simplify.
$$\frac{1}{4}x = \frac{3}{5}$$
31. Solve. Don't forget to simplify.
$$\frac{4}{5} = -10x$$
32. Solve. Don't forget to simplify.
$$-\frac{9}{10}x = 8$$
33. Solve. Don't forget to simplify.
$$-x = \frac{7}{13}$$
34. Solve. Don't forget to simplify.
$$-\frac{49}{45} = -\frac{28}{27}a$$
35. Solve. Don't forget to simplify.
$$-\frac{14}{9} = \frac{10}{3}t$$

36. Solve. Don't forget to simplify. $-\frac{7}{20}x = -\frac{21}{10}$
37. Solve. Don't forget to simplify. $-\frac{25}{17} = -\frac{35}{34}a$
38. The recipe for Cherry Brie Tossed Salad calls for $\frac{3}{4}$ cups of sliced almonds. How much is needed to make $\frac{1}{2}$ of the recipe?
39. It takes $\frac{2}{3}$ **yd** of ribbon to make a bow. How much ribbon is needed to make 5 bows?
40. A rectangular table top measures $\frac{4}{5}$ **m** long by $\frac{3}{5}$ **m** wide. What is its area?
41. If each piece of pie is $\frac{1}{6}$ of a pie, how much of the pie is $\frac{1}{2}$ of a piece?
42. Benny uses $\frac{2}{5}$ **g** of toothpaste each time he brushes his teeth. If Benny buys a 30-**g** tube, how many times will he be able to brush his teeth?
43. A piece of coaxial cable $\frac{4}{5}$ **m** long is to be cut into 8 pieces of the same length. What is the length of each piece?
44. A tanker that delivers gasoline to gas stations had 1400 **gal** of gasoline when it was $\frac{7}{8}$ full. How much could the tanker hold when it is full?
45. How many $\frac{2}{3}$ -**cup** cereal bowls can be filled from 10 **cups** of cornflakes?

Chapter 4.

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|------------------|------------|
| 1. Find the LCM. | 36, 48 |
| 2. Find the LCM. | 81, 90 |
| 3. Find the LCM. | 30, 40 |
| 4. Find the LCM. | 35, 45 |
| 5. Find the LCM. | 12, 18, 40 |
| 6. Find the LCM. | 24, 36, 60 |

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| 7. Find the LCM. | 180, 100, 450 |
| 8. Find the LCM. | $7x, xy$ |
| 9. Find the LCM. | $6r^3st^4, 8rs^2t$ |
| 10. Find the LCM. | $3m^2n^4p^5, 9mn^2p^4$ |
| 11. Add and simplify | $\frac{-4}{9} + \frac{1}{9}$ |
| 12. Add and simplify | $\frac{-7}{11} + \frac{3}{-11}$ |
| 13. Add and simplify | $\frac{3}{32}t + \frac{13}{32}t$ |
| 14. Add and simplify | $\frac{1}{8} + \frac{1}{6}$ |
| 15. Add and simplify | $\frac{5}{-8} + \frac{5}{6}$ |
| 16. Add and simplify | $\frac{5}{12} + \frac{8}{15}$ |
| 17. Add and simplify | $-\frac{1}{10}x + \frac{1}{15}x$ |
| 18. Add and simplify | $-\frac{5}{12} + \frac{7}{-24}$ |
| 19. Add and simplify | $\frac{3}{10} + \frac{5}{12} + \frac{8}{15}$ |
| 20. Add and simplify | $\frac{2}{9} + \frac{7}{10} + \frac{-4}{15}$ |
| 21. Add and simplify | $\frac{1}{3} + \frac{-7}{9} + \frac{-1}{2}$ |
| 22. Subtract and simplify | $\frac{-8}{a} - \frac{6}{a}$ |

23. Subtract and simplify $\frac{2}{5}a - \frac{3}{4}a$
24. Subtract and simplify $\frac{7}{15} - \frac{4}{5}$
25. Subtract and simplify $\frac{2}{15} - \frac{5}{12}$
26. Subtract and simplify $-\frac{5}{18} - \frac{2}{27}$
27. Solve. $x - \frac{4}{9} = \frac{3}{9}$
28. Solve. $x + \frac{1}{3} = \frac{7}{9}$
29. Solve. $\frac{2}{3} + x = \frac{4}{5}$
30. Solve. $-3 = \frac{3}{4}t - \frac{1}{2}$
31. Solve. $\frac{4}{3} - \frac{1}{5}t = \frac{3}{4}$
32. Solve. $\frac{2}{5} - \frac{3}{4}t = \frac{4}{3}$
33. Solve. $n - \frac{3}{10} = -\frac{1}{6}$
34. Combine like term. $1\frac{3}{14}t + 7\frac{2}{21}t$
35. Combine like term. $9\frac{1}{2}x - 7\frac{3}{8}x$
36. Combine like term. $9\frac{2}{7}x + 2\frac{3}{8}x$
37. Combine like term. $37\frac{5}{9}t - 25\frac{4}{5}t$

38. Multiply. $16 \cdot 1\frac{2}{5}$
39. Multiply. $-2\frac{3}{10} \cdot 4\frac{2}{5}$
40. Multiply. $\left(-6\frac{3}{10}\right) \cdot \left(-5\frac{7}{10}\right)$
41. Divide. $30 \div 2\frac{3}{5}$
42. Divide. $5\frac{1}{4} \div 2\frac{3}{5}$
43. Divide. $5\frac{1}{10} \div 4\frac{3}{10}$
44. Divide. $1\frac{1}{2} \div (-50)$
45. Kate walked $\frac{7}{8}$ **mi** to the student union, and then $\frac{2}{5}$ **mi** to class. How far did Kate walk?
46. A recipe for muffins calls for $\frac{1}{2}$ **qt** (quart) of buttermilk, $\frac{1}{3}$ **qt** of skin milk, and $\frac{1}{16}$ **qt** of oil. How many quarts of liquid ingredients does the recipe call for?
47. A triathlete runs $\frac{7}{8}$ **mi**, canoes $\frac{1}{3}$ **mi**, and swims $\frac{1}{6}$ **mi**. How many miles does the triathlete cover?
48. For a family barbecue, Kayla bought packages of hamburger weighing $1\frac{2}{3}$ **lb** and $5\frac{3}{4}$ **lb**. What was the total weight of the meat?
49. A plumber uses pipes of lengths $10\frac{5}{16}$ **in.** and $8\frac{3}{4}$ **in** when installing a sink. How much pipe is used?
50. Executive Car Care sells 45 **-in.** upholstery fabric for car restoration. Art buys $9\frac{1}{4}$ **yd** and $10\frac{5}{6}$ **yd** for two car projects. How many total yards Art buy?

Chapter 5.

1. Add. $2.006 + 5.817$
2. Add. $0.8096 + 0.7856$

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| 3. Subtract. | $45 - 0.999$ |
| 4. Subtract. | $10.056 - 0.392$ |
| 5. Combine like terms. | $23.28a - 15.79a$ |
| 6. Combine like terms. | $15.2t + 7.9 + 5.9t$ |
| 7. Combine like terms. | $2.25 + 3.2t - 1.33 + 5.79t$ |
| 8. Combine like terms. | $3.2r - 4.1t + 5.6t + 1.9r$ |
| 9. Combine like terms. | $5.8 + 9.7x - 7.2 - 12.8x$ |
| 10. Combine like terms. | $4.8x + 1.9y - 5.7x + 1.2y$ |
| 11. Multiply. | $6.8 \cdot 7$ |
| 12. Multiply. | $28.6 \cdot 0.09$ |
| 13. Multiply. | $(-37.4)(-2.4)$ |
| 14. Multiply. | $569(-1.05)$ |
| 15. Multiply. | $(-12.3)(-1.08)$ |
| 16. Divide. | $1.581 \div 0.017$ |
| 17. Divide. | $-24.969 \div 82$ |
| 18. Simplify. | $(5 - 0.04)^2 \div 4 + 8.7 \cdot 0.4$ |
| 19. Simplify. | $6 \cdot 0.9 - 0.1 \div 4 + 0.2^3$ |
| 20. Simplify. | $12^2 \div (12 + 2.4) - [(2 - 2.4) \div 0.8]$ |
| 21. Solve. Remember to check. | $12.4 + 3.7x = 2.04$ |
| 22. Solve. Remember to check. | $-4.2x + 3.04 = -4.1$ |
| 23. Solve. Remember to check. | $-2.9x - 2.24 = -17.9$ |
| 24. Solve. Remember to check. | $-4.62 = 5.68 - 2.5t$ |
| 25. Solve. Remember to check. | $3x + 4 = 11x - 6$ |
| 26. Solve. Remember to check. | $-6.21 - 4.3t = 9.8(t + 2.1)$ |

27. Solve. Remember to check.

$$5.9x + 67 = 7.6x + 16$$

28. Solve. Remember to check.

$$4(x - 2) - 9 = 2x + 9$$

29. Solve. Remember to check.

$$9(x - 4) + 13 = 4x + 12$$

30. Solve. Remember to check.

$$43(7 - 2x) + 34 = 50(x - 4.1)$$

Chapter 7.

1. Simplify the ratio. $10\frac{5}{6}$ to $7\frac{1}{6}$.

2. Simplify the ratio. 0.48 to 0.64.

3. Determine whether the two pairs of numbers are proportional: 7, 8 and 63, 72.

4. Solve.

$$\frac{9}{4} = \frac{27}{x}$$

5. Solve.

$$\frac{150}{2.5} = \frac{x}{6}$$

6. Solve.

$$\frac{x}{100} = \frac{27}{64}$$

7. Solve.

$$\frac{68}{y} = \frac{17}{25}$$

8. Solve.

$$\frac{4}{\frac{5}{8}} = \frac{3}{x}$$

9. An ocean liner traveled **432 km** in **12 hr**. At that rate, how far would the boat travel in **42 hr**?

10. A watch loses **2 min** in **10 hr**. At this rate, how much will it lose in **24hr**?

11. A drama teacher reserves **9** copies of The Complete Works of William Shakespeare for her class. If the ratio of books to students is **3** to **5**, how many students are in the class?

12. Fred uses **3 gal** of paint to cover **1275 ft²** of siding. How much siding can Fred paint with **7 gal** of paint?

13. A professor must grade **32** essays in a literature class. She can grade **5** essays in **40** min. At this rate, how long will it take her to grade all **32** essays?

14. An **8-lb** turkey breast contains **36** servings of meat. How many pounds of turkey breast would be need for **54** servings?

Chapter 8.

1. Write a percent as an equivalent decimal. 67%
2. Write a percent as an equivalent decimal. 0.18%
3. Write a percent as an equivalent decimal. $14\frac{7}{8}\%$
4. Write a percent as an equivalent decimal. 23.19%
5. Write a percent as an equivalent decimal. $93\frac{1}{8}\%$
6. Write a decimal as an equivalent percent. 0.47
7. Write a decimal as an equivalent percent. 4
8. Write a decimal as an equivalent percent. 0.334
9. Write a decimal as an equivalent percent. 0.8911
10. Write a fraction as an equivalent percent. $\frac{7}{25}$
11. Write a fraction as an equivalent percent. $\frac{3}{4}$
12. Write a fraction as an equivalent percent. $\frac{2}{5}$
13. Write a fraction as an equivalent percent. $\frac{11}{16}$
14. Write a fraction as an equivalent percent. $\frac{29}{50}$
15. Write a percent as an equivalent fraction. 62.5%
16. Write a percent as an equivalent fraction. $33\frac{1}{3}\%$
17. Write a percent as an equivalent fraction. $83\frac{1}{3}\%$
18. Write a percent as an equivalent fraction. 4.85%

19. Write a percent as an equivalent fraction. 150%
20. What is 85% of 276 ?
21. 150% of 30 is what?
22. What is 6% of \$300 ?
23. 3.8% of 50 is what?
24. \$39 is what percent of 10 ?
25. 20 is what percent of 10 ?
26. What percent of \$300 is \$150 ?
27. 20 is 50% of what?
28. What is $62\frac{1}{2}\%$ of 10 ?
29. What 8.3% is of \$10,200 ?
30. Of the **294** million people in the United States, **26%** are smokers. How many are smokers?
31. A lab technician has **680 ml** of a solution of water and acid: **3%** is acid. How many milliliters are acids? water?
32. On a test of **40** items, Christina got **91%** correct. (There was partial credit on some items.) How many items did she get correct? incorrect?
33. In a medical study, it was determined that if **800** people kiss someone who has a cold, only **56** will actually catch a cold. What percent is this?

Chapter 9.

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| 1. Simplify. | $\sqrt{64}$ |
| 2. Simplify. | $\sqrt{4}$ |
| 3. Simplify. | $\sqrt{81}$ |
| 4. Simplify. | $-2\sqrt{49}$ |
| 5. Simplify. | $-3\sqrt{1} + \sqrt{0}$ |
| 6. Simplify. | $5(\sqrt{121} - 4)$ |

7. Simplify. $\sqrt{64} - 2^3$
8. Simplify. $(-3)^2 - \sqrt{36}$
9. Simplify. $-4^2 + \sqrt{81}$
10. Simplify. $-2(-\sqrt{100} - 3 \cdot 2^4)$
11. Simplify. $-2\sqrt{9} + 3\sqrt{81}$
12. Simplify. $5\sqrt{36} - 7\sqrt{100}$

Chapter 10.

1. Add. $(-5x^4y^3 + 7x^3y^2 - 4xy^2) + (2x^3y^3 - 3x^3y^2 - 5xy)$
2. Add. $(8a^3b^2 + 5a^2b^2 + 6ab^2) + (5a^3b^2 - a^2b^2 - 4a^2b)$
3. Add. $(6x^3y^3 - 4x^2y^2 + 3xy^2) + (x^3y^3 + 7x^3y^2 - 2xy^2)$
4. Add. $(17.5abc^3 + 4.3a^2bc) + (-4.9a^2bc - 5.2abc)$
5. Add. $(23.9x^3yz - 19.7x^2y^2z) + (-14.6x^3yz - 8x^2yz)$
6. Subtract. $(8x^4 + 3x^3 - 1) - (4x^2 - 3x + 5)$
7. Subtract. $(1.2x^3 + 4.5x^2 - 3.8x) - (-3.4x^3 - 4.7x^2 + 23)$
8. Subtract. $(0.5x^4 - 0.6x^2 + 0.7) - (2.3x^4 + 1.8x - 3.9)$
9. Subtract. $(9x^3y^3 + 8x^2y^2 + 7xy) - (3x^3y^3 - 2x^2y + 3xy)$
10. Subtract. $(3x^4y + 2x^3y - 7x^2y) - (5x^4y + 2x^2y^2 - 2x^2y)$
11. Evaluate the polynomial: $-6 - x$ for $x = -4$
12. Evaluate the polynomial: $-3x^2 - 2x + 9$ for $x = 4$
13. Evaluate the polynomial: $-3x^3 + 7x^2 - 3x - 2$ for $x = 2$
14. Multiply. $(9a^5b^4)(2a^4b^7)$

15. Multiply. $(4a^3b^4c^2)(3a^5b^4)$
16. Multiply. $(7x^3y^5z^2)(8x^3z^4)$
17. Multiply. $(3x^2)(-4x^3)(2x^6)$
18. Multiply. $(-2y^5)(10y^4)(-3y^3)$
19. Multiply. $-9x(-x-1)$
20. Multiply. $x^2(x^3+1)$
21. Multiply. $5x(2x^2-6x+1)$
22. Multiply. $-4x(2x^3-6x^2-5x+1)$
23. Multiply. $4xy(3x^2+2y)$
24. Multiply. $7xy(3x^2-6y^2)$
25. Multiply. $3a^2b(4a^5b^2-3a^2b^2)$
26. Multiply. $4a^2b^2(2a^3b-5ab^2)$