

Chapter 2 & 3 Review**Short Answer**

1. Identify equal rational numbers in this list:

$$\frac{-3}{-4}, \frac{-3}{4}, \frac{4}{3}, \frac{3}{-4}, \frac{3}{4}$$

2. Determine this sum.

$$(-2.5) + (-6.1)$$

3. Determine this sum.

$$\frac{14}{7} + \left(\frac{15}{-14} \right)$$

4. A student first borrowed \$40.25, then borrowed another \$15.75 from his father. He then paid back \$20.75. How much does he still owe his father?

5. Determine this difference.

$$\frac{18}{7} - \left(\frac{5}{-7} \right)$$

6. Determine this difference.

$$-4\frac{2}{3} - 2\frac{1}{2}$$

7. Determine this product.

$$\left(\frac{3}{-2} \right) \left(\frac{5}{-4} \right)$$

8. Determine this product.

$$\left(-4\frac{1}{3} \right) \left(1\frac{4}{5} \right)$$

9. Determine this quotient.

$$\frac{11}{12} \div \left(\frac{5}{-6} \right)$$

10. Determine this quotient.

$$1\frac{1}{2} \div \left(-2\frac{3}{5} \right)$$

Name: _____

ID: A

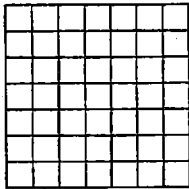
11. Evaluate.

$$\frac{5}{6} \div \left(\frac{4}{3} + \frac{1}{6} \right)$$

12. Evaluate.

$$\frac{5}{6} - \frac{2}{3} \times \frac{3}{4} + \frac{5}{6}$$

13. Write the number of unit squares in this large square as a power.



14. Write the base of $-(-5)^3$.

15. Write 7^5 as repeated multiplication.

16. Write $(-4) \times (-4) \times (-4) \times (-4) \times (-4) \times (-4)$ as a power.

17. Evaluate: 6^5

18. Evaluate: -4^4

19. Evaluate: $(-5)^7$

20. Evaluate: 10^7

21. Write 1 000 000 as a power of 10.

22. Evaluate: -8^0

23. Evaluate: $(-13)^0$

24. Evaluate: $(-10^3)^0$

25. Write $(5 \times 10^4) + (8 \times 10^1) + (9 \times 10^2) + (6 \times 10^0)$ in standard form.

26. Which number is the greatest?
i) $(5 \times 10^3) + (6 \times 10^2) + (4 \times 10^1) + (7 \times 10^0)$
ii) 5645
iii) $(5 \times 10^3) + (7 \times 10^2) + (8 \times 10^0)$
iv) 5780
27. Evaluate: $4 - 6^2$
28. Evaluate: $(-3 \times 6)^2$
29. Evaluate: $6^5 - 3^3$
30. Evaluate: $2^3 - (-3)^3$
31. Evaluate: $(5^3 - 4^2)^0 - (6^2 - 8^0)$
32. Evaluate: $(3 + 4)^2 - (2 - 4)^3$
33. Write the product of $5^3 \times 5^4$ as a single power.
34. Write the product of $(-7)^7 \times (-7)^3$ as a single power.
35. Write the quotient of $\frac{6^{10}}{6^5}$ as a single power.
36. Express $7^9 \times 7^3 \div 7^6$ as a single power.
37. Express $\frac{(-5)^9 \times (-5)^6}{(-5)^3}$ as a single power.
38. Evaluate: $\frac{(5)^8 \times (5)^6}{(5)^{12}}$
39. Write $[(-4) \times (-5)]^3$ as a product of powers.
40. Write $\left(\frac{11}{9}\right)^5$ as a quotient of powers.

41. Write $-(7^2)^3$ as a power.

42. Evaluate: $[(-4) \times (5)]^3$

43. Evaluate: $[(-5)^0]^3$

44. Which expressions have positive values?

i) $[(-5)^2]^7$

ii) $[-(-5)^2]^7$

iii) $-(5^2)^7$

iv) $-[-(-5)^2]^7$

45. Write the base and the exponent of this power: $(8)^7$

46. Write the base and the exponent of this power: $(-5)^6$

47. Which answers are positive?

i) $(5)^3$

ii) $(-7)^6$

iii) $(-3)^7$

iv) $(-6)^3$

48. Which power is greater, 6^7 or 7^6 ?

49. Complete this table.

Power	Base	Exponent	Repeated Multiplication
5^3			
3^4			
	7	3	
			$6 \times 6 \times 6 \times 6 \times 6$

50. Write 4865 using powers of 10.

51. Write 805 076 using powers of 10.

52. Write $(2 \times 10^4) + (5 \times 10^2)$ in standard form.

53. Evaluate: $6^2 - [12 \div (-2)]^3$

54. Evaluate: $\frac{5^3 \times (2+4)^2 \times 6(-9)^0}{-(4)^0 \times 6^3 \times (7-2)^2}$

55. Evaluate: $3^3 \times 3^4 - 3^5 \times 3$

56. Evaluate: $(-2)^6 \div (-2)^5 - (-3)^5 \div (-3)^0$

57. Simplify, then evaluate.

$$(-2)^4 \times (-2)^6 \div (-2)^6$$

58. Simplify, then evaluate.

$$\frac{(-2)^6 \times (-2)^2}{(-2)^3 \times (-2)^0}$$

59. Simplify, then evaluate.

$$\frac{(2^4)^3 \times (2^2)^4}{(2^4 \times 2^4)^2}$$

60. Simplify, then evaluate.

$$\left[(-2)^4 \times (-2)^3 \right] - \left[(-3)^4 \div (-3)^3 \right]$$

61. Which rational number is greater?

$$3.3, 3.\bar{3}$$

62. Order these numbers from least to greatest.

$$-\frac{3}{4}, -\frac{7}{9}, -\frac{5}{6}, -\frac{2}{3}$$

63. Determine this sum.

$$\frac{5}{3} + \left(-\frac{7}{6} \right)$$

64. Determine this sum.

$$-\frac{3}{2} + \frac{2}{5}$$

Name: _____

ID: A

65. Determine this sum.

$$-4\frac{3}{4} + \left(-1\frac{3}{5}\right)$$

66. Determine this difference.

$$6\frac{1}{2} - \left(-5\frac{1}{3}\right)$$

67. Evaluate this expression.

$$\frac{11}{2} - \left(-\frac{7}{5}\right) + \left(-\frac{13}{4}\right)$$

68. Determine this product.

$$4 \times \left(-\frac{7}{3}\right)$$

69. Determine this product.

$$\left(\frac{10}{7}\right)\left(-\frac{4}{3}\right)$$

70. Determine this product.

$$\left(3\frac{1}{2}\right)\left(-3\frac{2}{3}\right)$$

71. Determine this quotient.

$$\left(-8\frac{2}{5}\right) \div \left(-1\frac{4}{5}\right)$$

72. Evaluate.

$$\frac{2}{3} - \left(-\frac{7}{12}\right)\left(-\frac{4}{21}\right)$$

73. Evaluate.

$$1\frac{7}{8} \times 2\frac{2}{5} - 1\frac{3}{4}$$

74. Evaluate.

$$\left[\frac{1}{3} + \frac{3}{5}\right] \div \left[\left(-\frac{5}{9}\right) \times \frac{12}{25}\right]$$

Name: _____

ID: A

75. Evaluate: $\left[\frac{8}{9} \times \left(-\frac{5}{12} \right) \right] \div \left(-\frac{4}{9} \right)$

Problem

76. Evaluate: $2^4 \times 3^3 \times 5^2$
Show your steps.

77. Evaluate: $(7)^5 + (-5)^4 - (6)^2$
Show your steps.

78. Evaluate: $5(5)^4 - 3(-3)^3$
Show your steps.

79. Evaluate this expression. Show your work.

$$-2\frac{3}{4} - (-4\frac{1}{3}) - 2\frac{5}{6}$$

80. Evaluate. Show your work.

$$\left[1\frac{5}{7} \times \left(-3\frac{5}{6} \right) \right] \div \left[\left(-2\frac{1}{10} \right) \div 0\frac{7}{8} \right]$$