

Think Academy US ONLINE

Middle School Math Program

Think Academy's Middle School Long-Term Math Program is designed for Grades 6–9, offering a professional, systematic, and comprehensive year-round curriculum tailored to North American students. The program includes four tracks: Core+, Honors, Challenge, and Competition.

Core+ (School Curriculum Track): Focuses on previewing and reinforcing key concepts through targeted practice, helping students easily achieve A grades in school math at their current grade level.

Honors (Accelerated Advancement Track): One year ahead of standard pace, matching the fastest public-school classes. It deepens understanding and aims for placement in advanced tracks, completion of 5 AP STEM courses before graduation, and perfect SAT/ACT Math scores.

Challenge: Two years ahead of standard pace, covering Algebra 1, Geometry, and Algebra 2 in two years. Align with top private schools, preparing students to complete 8 AP STEM courses and get perfect SAT/ACT Math results by graduation.

Competition: Design around the AMC syllabus, build competitive math skills through advanced, contest-level topics. Taught by an experienced coaching team with a proven record of training AMC and AIME winners, it helps students qualify for AIME by Grades 8–9.

	Year 1			Year 2			Year 3			Year 4			Year 5		
	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring
Core+	Math 6/7a			Math 7b/8			Algebra 1			Geometry			Algebra 2		
Honors	Pre-Algebra			Algebra 1			Geometry			Algebra 2/ Trigonometry			Pre-Calculus		
Challenge	Pre-Algebra+			Algebra 1			Intro to Geo			Geometry			Algebra 2		
Competition															
				AMC 8 HR			AMC 10 Introduction			AMC 10 AIME qualify			AMC 12+ AIME		

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Middle School Competition Track

Student Results

2022-2024 AMC8 Number of Students Awarded:



Achievement Roll
(Lower Grade
Achievement Award)



Honor Roll
(National Top 5%)



DHR
(National Top 1%)

2022-2024 AMC10 Number of Students Awarded:



AIME Qualification
(National Top 7%)



Honor Roll
(National Top 5%)



DHR
(National Top 1%)

2024 Think Global IMO Award Winner

7金 1银

金牌总数居全球第一



International Mathematical Olympiad
Foundation Bronze Sponsor

Think Academy is an official partner of the
International Mathematical Olympiad (IMO)

Why Think Academy Competition Courses Trained Thousands of Award-Winning Students?

1 One-Stop Professional System for Math Competitions

Think Competition follows the AMC syllabus and aligns with students' learning pace. **Grades 5–6 focus on AMC 8**, while **Grades 7–8 focus on AMC 10**. The curriculum covers the four core modules of math competitions — Algebra, Geometry, Number Theory, and Counting & Probability — enabling students to achieve one competition milestone each year and **complete AMC 10 preparation before high school, successfully qualifying for AIME**.

2 Expert Coaches. Top Results. Proven Success.

Think Competition courses are taught by **instructors with many years of competition teaching experience**, enabling students to master complex contest concepts efficiently and with ease.



James
Upenn - 5 YOЕ



Dennis
Duke - 4 YOЕ



Yichen
Columbia - 4 YOЕ

3 Collaborate and Excel with Outstanding Peers

Each year, the Competition Track begins with an entrance assessment to ensure students learn alongside peers of similar ability. This structure makes preparation more engaging and collaborative, as students motivate one another and grow together throughout the journey.

Course Highlights

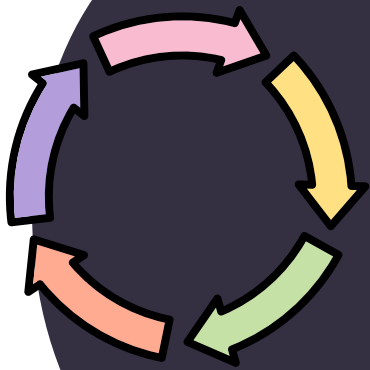
Clear Structure, Worry-Free for Parents

Personalized Learning Plans with Full Progress Tracking

- **Before Enrollment:** Teachers create **personalized study plans** based on each student's goals and ability
- **During Learning:** Teachers give **regular feedback and targeted advice**, helping parents track progress
- **Mid-Term & Final Evaluations:** **Parent meetings** and updated study plans ensure steady improvement



Weekly Learning Cycle to Ensure Steady Progress



- **Pre-Class Preparation:** **15-minute preview** to review key concepts and prepare for new lessons
- **Homework:** **Assigned after each class**, with teacher feedback shared with parents
- **Office Hour:** **Free live sessions** to review and clarify difficult problems
- **Homework Review Videos:** Each homework question includes a **detailed video explanation** for easy review

Year-Round Learning Support

- **Year-round Parent App service** providing fast responses
- Through the Parent App, parents get **direct contact with teachers** for efficient communication and real-time progress updates
- Instant online homework help for **timely learning support**

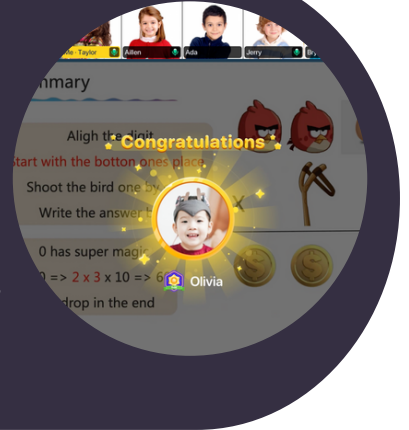


Course Highlights

Happy Learning, Better Results

Thoughtfully Crafted Lessons Inspire a Love for Math

- **Interactive games and scenario-based teaching** make math fun and engaging
- **Gold coin reward system** lets students exchange coins for prizes, motivating them to complete learning tasks actively



Self-Developed Learning App Enhances Every Online Class

- **Think Academy learning app** enhances in-class interaction with hand-raising, polls, and group activities —**keeping students engaged every three minutes**
- Teachers **track progress in real time** for an effective learning experience



A Sense of Achievement Builds Intrinsic Motivation

- Students learn efficiently in class and get **full after-class support** with detailed homework videos and free weekly Office Hours.
- Students **gain higher grades, faster progress**. They are naturally motivated to put more effort in STEM learning and become **confident math learners**



Calculation with Rational Numbers

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

2. $-\frac{1}{12} - (+\frac{1}{8})$

3. $(-\frac{12}{5}) - (-3.25)$

4. $1.8 - (-1.8 + \frac{2}{3})$

5. $-4\frac{1}{5} + 2\frac{1}{4}$

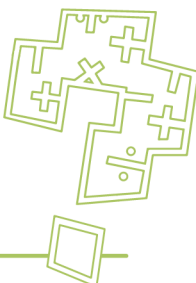
6. $4.73 - \left[2\frac{2}{3} - (2.63 - 1\frac{1}{3}) \right]$

7. $-1\frac{1}{4} + (-\frac{5}{6})$

8. $-\frac{2}{15} + (-0.8)$

9. $6\frac{1}{12} + \left(-3\frac{5}{18} \right)$

10. $1.5 + \{ (-1.8) + [0.8 + (-0.9)] \}$

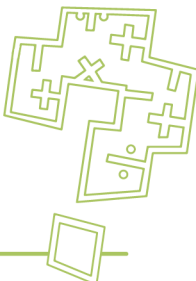


11. $-3\frac{1}{3} + [2\frac{1}{2} + (-3\frac{2}{3}) + 5\frac{1}{2} + (-7\frac{3}{4})]$

12. $(-4\frac{7}{8}) - (-5\frac{1}{2}) + (-4\frac{1}{4}) - 3\frac{1}{8}$

13. $-15\frac{2}{3} + [13\frac{2}{3} - |-4\frac{2}{15}| + (-4\frac{1}{5})]$

14. $(-0.5) - (-3\frac{1}{4}) + 6.75 - 5\frac{1}{2}$

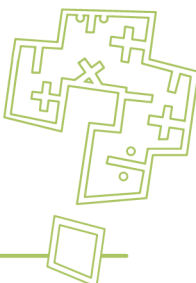


15. $178 - 87.21 + 43\frac{2}{21} + 53\frac{19}{21} - 12.79$

16. $(+0.1) + (+8\frac{1}{3}) + 11\frac{2}{3} + |-4.4|$

17. $-\frac{2}{7} - (-\frac{1}{2}) + |-1\frac{1}{2}|$

18. $(-36.32) + 35\frac{41}{50} + \left| -9\frac{8}{25} \right| + \left| -36\frac{8}{25} \right|$

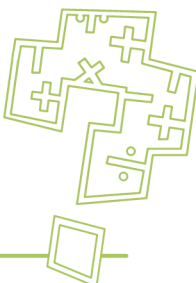


19. $-4\frac{5}{6} - (+3\frac{3}{5}) - (-3\frac{1}{6}) - (+1\frac{2}{5})$

20. $(+1\frac{3}{4}) - \frac{5}{6} - 1\frac{1}{6} + \frac{1}{2}$

21. $1\frac{2}{3} - \left(+1\frac{2}{5}\right) - \left(-\frac{4}{3}\right) - (-0.6) - 3\frac{4}{5}$

22. $-\frac{7}{5} - 1\frac{1}{5} - 2\frac{3}{5} + 3\frac{1}{5} + 2 - \frac{4}{5} + \frac{4}{5}$

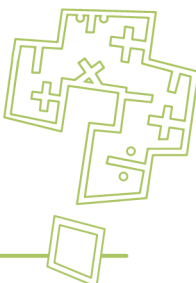


23. $-32\frac{1}{3} - \left[5\frac{1}{4} + \left(-3\frac{1}{7} \right) - 5.25 - 2\frac{6}{7} \right]$

24. $5.72 - (+15.8)$

25. $-0.47 - \left(-3\frac{47}{50} \right)$

26. $|-5-7| + |-5-(-7)| + |(-243)+(-246)|$



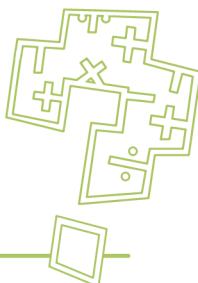
27. $(-3\frac{1}{2}) - (+5\frac{1}{4})$

28. $-(+\frac{1}{6}) - (-\frac{1}{4}) - (+\frac{1}{3}) - (-\frac{1}{2})$

29. $\left| -3\frac{8}{11} \right| - \left| -\frac{27}{10} \right| + (-\frac{9}{11}) - (-3\frac{4}{5})$

30. $(+0.125) + \left(3\frac{1}{4} \right) + \left(-3\frac{1}{8} \right) + \left(11\frac{2}{3} \right) + (-0.25)$

31. $211 \times (-455) + 365 \times 455 - 211 \times 545 + 545 \times 365$

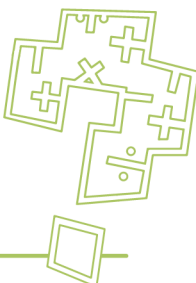


$$32. -1^{10} - \left(\frac{13}{14} - \frac{11}{12}\right) \times [9 - (-3)^2] + \frac{1}{2} \div 3$$

$$33. (-1)^8 - \left(\frac{1}{2} - \frac{2}{3}\right) \div \left(-\frac{1}{6}\right) \times [-2 - (-3)^2] - \left|\frac{1}{8} - 0.5^2\right|$$

$$34. \left[1\frac{2}{13} - \left(\frac{5}{8} - \frac{1}{6} + \frac{7}{12}\right) \times 24\right] \div (-5)$$

$$35. -117 \times \left(\frac{1}{32} - 0.125\right) \div (-1.2) \times \left(-1\frac{3}{13}\right)$$

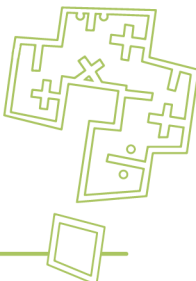


36. $42 \times \left(-\frac{2}{3}\right) + \left(-\frac{3}{4}\right) \div (-0.25)$

37. $\left[30 - \left(\frac{7}{9} + \frac{5}{6} - \frac{11}{12}\right) \times (-36)\right] \div (-5)$

38. $\left(+1\frac{2}{7}\right) \div \left(-\frac{3}{4}\right) \div \left(-\frac{15}{14}\right) \times \left(-\frac{5}{8}\right)$

39. $\left(-1\frac{3}{4}\right) \div \left(-1\frac{1}{2}\right) - \left(\frac{3}{4} + \frac{1}{2}\right) \div \left(-\frac{5}{4}\right)$



40. $3 \times (-2)^3 - 4 \times (-3)^2 + 8$

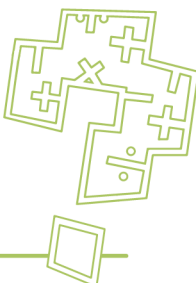
41. $(-1)^{10} \times 2^2 + (-2)^3 \div 2$

42. $-2^2 - (-2)^2 - 2^3 + |(-2)^3 - 2|$

43. $-1^4 - \frac{1}{6} \times [2 - (-3)^2]$

44. $(-10)^2 + [(-4)^2 - (3 + 3^2) \times 2]$

45. $(-1)^4 - (1 - 0.5) \times \frac{1}{3} \times [2 - (-2)^2]$

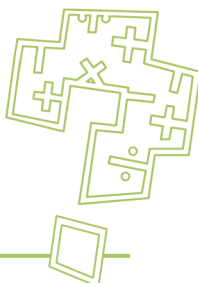


46. $(-2)^{2003} + (-2)^{2002}$

47. $(-0.25)^{2005} \times 4^{2004}$

48. $-0.5^2 + \frac{1}{4} - |-2^2 - 4| - (-1\frac{1}{2})^3 \times \frac{4}{9}$

49. $(-2)^3 - 3 \times [(-4)^2 + 2] - (-3)^2 \div (-2)$



50. $-2^3 \div (-4) \times (-7 + 5)$

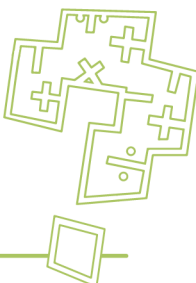
51. $(-1)^{10} \times 2^2 + (-2)^3 \div 2$

52. $8 - 2^3 \div (-4) \times (-7 + 5)$

53. $(-3)^2 \times [-\frac{2}{3} + (-\frac{5}{9})] - (-6)^2 \div 4$

54. $-1 - [-2 - (1 - 0.5 \times 4^3)]$

55. $-2\frac{1}{5} \times \frac{1}{3} - (+3\frac{4}{5}) \div 3 + (+22\frac{1}{2}) \div 3 - 2\frac{1}{2} \times \frac{1}{3}$



56. $9+5\times(-3)-(-2)^2\div 4$

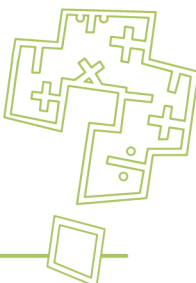
57. $(-5)^3\times[2-(-6)]-300\div 5$

58. $-1\frac{2}{3}\times(1-\frac{2}{3})\div 1\frac{1}{9}$

59. $[12-4\times(3-10)]\div 4$

60. $2\times(-3)^3-4\times(-3)+15$

61. $-1^4-\frac{1}{6}\times[2-(-3)^2]$



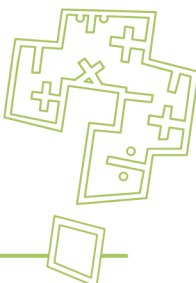
$$62. \quad 3 + 50 \div 2^2 \times \left(-\frac{1}{5}\right) - 1$$

$$63. \quad -2^4 \div \frac{16}{9} \times \left(-\frac{3}{4}\right)^2$$

$$64. \quad -0.25^2 \div \left(-\frac{1}{2}\right)^3 + \left(\frac{1}{8} - \frac{1}{2}\right) \times (-1)^{100}$$

$$65. \quad \frac{-2^2 - (-1)^{100} - 12 \div \left(-\frac{1}{2}\right)^2}{1 + |-1 - 3^2 \times 2|}$$

$$66. \quad -8 - 3 \times (-1)^3 - (-4)^4$$



67. $4 - 5 \times \left(-\frac{1}{2}\right)^3$

68. $36 \times \left(\frac{1}{2} - \frac{1}{3}\right)^2$

69. $-2^4 \div \frac{4}{9} \times \left(-\frac{3}{2}\right)^2$

70. $\left[1\frac{1}{24} - \left(\frac{3}{8} + \frac{1}{6} - \frac{3}{4}\right) \times \frac{3}{4}\right] \div 5$

71. $\left(\frac{5}{12} + \frac{2}{3} - \frac{3}{4}\right) \times (-12)$

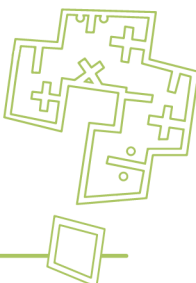
72. $16 \div (-2)^3 - \left(-\frac{1}{8}\right) \times (-4)$

73. $\left(-\frac{1}{2} - \frac{1}{3}\right) \div \left(-\frac{1}{6}\right) + (-2)^2 \times (-14)$

74. $-3 - [-5 + (1 - 0.2 \times \frac{3}{5}) \div (-2)]$

75. $(-5)^2 \times \left(-\frac{3}{5}\right) \div \left(-\frac{9}{25}\right)$

76. $-1\frac{2}{3} \times \left(1 - \frac{2}{3}\right) \div 1\frac{1}{9}$



77. $[12 - 4 \times (3 - 10)] \div (4 - 9)$

78. $-5 + (-2)^4 - 2^4 \div (-2)^3$

79. $24 + 16 \div (-2)^3 \div (-10)$

80. $(5 + 3 \div \frac{1}{3}) \div (-2) + (-3)^2$

81. $4 - (-2)^3 - 33 \div (-1)^3$

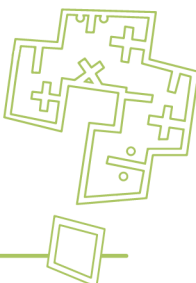
82. $-\frac{3}{4} \times [-33 \times (-\frac{2}{3})^2 - 23]$

83. $-9 \div 3 + (\frac{1}{2} - \frac{2}{3}) \times 12 + 32$

84. $(-\frac{5}{23}) \times (-34) - \frac{5}{23} \times 17 - \frac{5}{23} \times (-6)$

85. $1\frac{1}{2} \times \frac{5}{7} - (-\frac{5}{7}) \times 2\frac{1}{2} + (-\frac{1}{2}) \times \frac{5}{7}$

86. $(-2)^2 \times (-1)^3 - 3 \times [-1 - (-2)]$



87. $2^3 - 3^2 - (-4) \times (-9) \times 0$

88. $4 - 5 \times \left(-\frac{1}{2}\right)^3$

89. $-8 - 3 \times (-1)^3 - (-1)^4$

90. $-2^3 \div \frac{4}{9} \times \left(-\frac{2}{3}\right)^2$

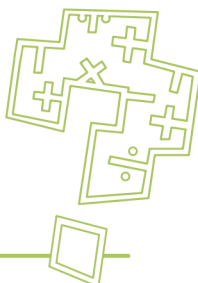
91. $-1 - \frac{1}{6} \times [12 - (-3)^2]$

92. $(-7) \times (-5) - 90 \div (-15)$

93. $42 \times \left(-\frac{2}{3}\right) + \left(-\frac{3}{4}\right) \div (-0.25)$

94. $\left(\frac{11}{12} - \frac{7}{6} + \frac{3}{4} - \frac{13}{24}\right) \times (-48)$

95. $(-370) \times \left(-\frac{1}{4}\right) + 0.25 \times 24.5 - \left(-5\frac{1}{2}\right) \times 25\%$



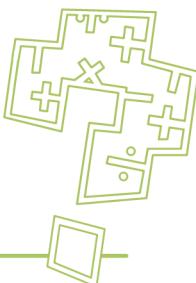
96. $3\frac{3}{4} \times \left(-1\frac{3}{5}\right)$

97. $(-2) \times (-5) \times \left(+\frac{5}{6}\right) \times (-30)$

98. $\left(-\frac{5}{12}\right) \times \frac{4}{15} \times (-1.5) \times 1\frac{1}{3}$

99. $\left(-8 + 1\frac{1}{3} - 0.04\right) \times \left(-\frac{3}{4}\right)$

100. $(-8) \times \left(-8\frac{3}{7}\right) + (-7) \times \left(-8\frac{3}{7}\right) - 15 \times 8\frac{3}{7}$



101. $9 \times \left(-99\frac{17}{18}\right)$

102. $\left(-\frac{1}{4}\right) \times (-7.98)$

103. $(-4) \times 5 \times (-0.25) \times (-8)$

104. $\left(-\frac{1}{4}\right) \times 0.5 \times \left(-70\frac{3}{5}\right) \times 4$

105. $-3.2 \times \left[-3 \times \left(-\frac{7}{9}\right) \times \left(-\frac{2}{21}\right) - 2 \times \left(-\frac{1}{3}\right)\right]$

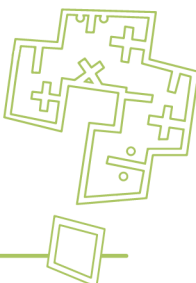
106. $49\frac{7}{8} \times (-4)$

107. $\frac{1}{5} \times \left(-75\frac{5}{6}\right)$

108. $\left(-9\frac{24}{25}\right) \times (-125)$

109. $(-125) \div \left(-\frac{3}{7}\right) + 62 \div \frac{3}{7} + 187 \div \left(-\frac{3}{7}\right)$

110. $\left(-\frac{2}{3} + \frac{3}{4} + \frac{1}{12}\right) \times (-24)$



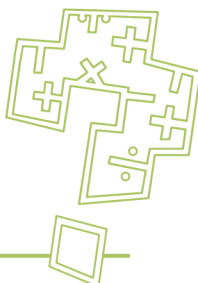
$$111. \left(-\frac{2}{3}\right) \times \left(-6\frac{2}{3}\right) \times \left(-\frac{1}{2}\right) \times \left(-1\frac{1}{5}\right)$$

$$112. \left(-1\frac{1}{7}\right) \times \left(-\frac{7}{8} + 1\frac{3}{4} - \frac{7}{12}\right)$$

$$113. \left(\frac{1}{3} - \frac{1}{2} \times \frac{7}{12}\right) \times 3\frac{3}{7}$$

$$114. \left(-\frac{1}{2}\right) \times \frac{5}{14} - \left(-\frac{5}{14}\right) \times 2\frac{1}{2} + 1\frac{1}{2} \times \frac{5}{14}$$

$$115. \frac{4}{27} \times \frac{5}{9} + 4 \times \frac{5}{27} + \frac{5}{9} \times \left(-\frac{5}{3}\right)$$



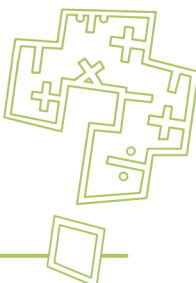
116. $\left(+\frac{7}{16}\right) \div (-1.75)$

117. $\left(-\frac{3}{5}\right) \div \left(-3\frac{1}{2}\right) \div \left(-1\frac{2}{7}\right)$

118. $(-81) \div 2\frac{1}{4} \times \frac{4}{9} \div (-15)$

119. $(-10) \div (-8) \times (-4)$

120. $(-1) \div \frac{1}{7} \times (-7)$

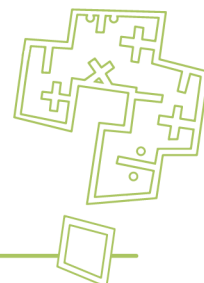


$$121. \quad -4.5 \times \frac{2}{5} \div \frac{9}{8}$$

$$122. \quad \left(-3\frac{1}{2}\right) \div \left(-1\frac{2}{3}\right) \div \left(-1\frac{1}{4}\right)$$

$$123. \quad \left(+5\frac{1}{2}\right) \div \left(-4\frac{4}{25}\right) \times \left(-\frac{13}{15}\right) \div \left(-3\frac{1}{18}\right)$$

$$124. \quad 4 \times (-15) \times \left(-\frac{1}{6} - \frac{3}{20} + \frac{4}{5} - \frac{7}{12}\right)$$

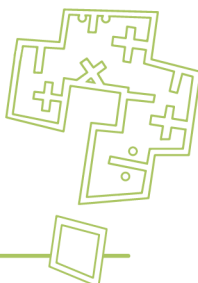


$$125. \frac{1}{3} \times \frac{1}{5} \times \frac{1}{7} + \left(-\frac{1}{3}\right) \times \left(-\frac{1}{5}\right) \times \left(-\frac{1}{7}\right) + \left(-\frac{1}{3}\right) \times \left(-\frac{1}{5}\right) \times \frac{1}{7} + \frac{1}{3} \times \left(-\frac{1}{5}\right) \times \frac{1}{7}$$

$$126. -(-8)^2 \times (-1)^5$$

$$127. \frac{5}{7} \div \left(-2\frac{2}{5}\right) - \frac{5}{7} \times \frac{5}{12} - \frac{5}{3} \div 4$$

$$128. (-6) \times (-3)^4$$



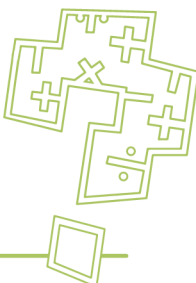
$$129. \quad 0.8 \times \frac{2}{11} + 4.8 \times \left(-\frac{2}{7}\right) - 2.2 \div \frac{3}{7} + 0.8 \times \frac{9}{11}$$

$$130. \quad -13.5 \times (-0.7) \div \left(-5\frac{3}{5}\right)$$

$$131. \quad \left(\frac{1}{6} - \frac{1}{7} + \frac{2}{3}\right) \div \left(-\frac{1}{42}\right)$$

$$132. \quad \frac{1}{4} \div (-0.1) - \left(-\frac{2}{3}\right) \div \left(-\frac{3}{4}\right)$$

$$133. \quad -216 \div 2^2 \times \left(-\frac{1}{2}\right)^2$$



$$134. \left(-1\frac{3}{7}\right) \times 1\frac{4}{7} \div \left(-1 - \frac{4}{7}\right) + 1\frac{4}{7}$$

$$135. \left(-11\frac{2}{3}\right) \div 0.5 - \left(-21\frac{1}{2}\right) \div 0.5 - \left(+10\frac{1}{3}\right) \div 0.5$$

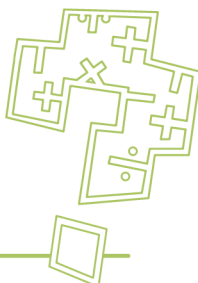
$$136. \left(-\frac{1}{6} - \frac{3}{20} + \frac{4}{5} - \frac{7}{12}\right) \times (-15 \times 4)$$

$$137. \left(-\frac{7}{18}\right) \times \frac{3}{7} \times (-2.4)$$

$$138. -48 \times \left(1 - \frac{1}{12} + \frac{3}{4}\right)$$

$$139. 0.5 \times 2^2 - (-3)^2$$

$$140. \frac{1}{12} \div \left(-\frac{1}{3} + \frac{3}{4}\right)$$



$$141. \quad (-2)^3 \times (-\frac{3}{8}) - (-2)^2 \div 2\frac{2}{3} \times (-\frac{2}{3})^2$$

$$142. \quad -1^4 - \left[\frac{2}{17} - (-\frac{7}{27} + \frac{2}{17}) \right] - (\frac{2}{3})^3$$

$$143. \quad (1\frac{3}{4} - \frac{7}{8} - \frac{7}{12}) \div (-\frac{7}{8})$$

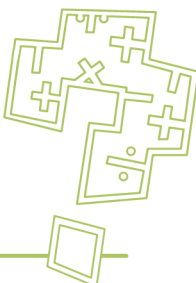
$$144. \quad (-7)^2 \div \frac{4}{13} - (-30) \times 3\frac{1}{4} + 3.25$$

$$145. \quad -86 + 86 \times 35.2 - 8.6 \times 42$$

$$146. \quad 25 \times \frac{3}{4} - (-25) \times \frac{1}{2} - 25 \times \frac{1}{4}$$

$$147. \quad -99\frac{1}{9} \times 27$$

$$148. \quad (-\frac{2}{3})^7 \times (1.5)^6$$



149. $(-\frac{1}{3})^{2010} \times 3^{2011}$

150. $(-7)^{2011} + 14 \times 7^{2010} - (-49) \times (-7)^{2009}$

151. $2 \div (-\frac{3}{7}) \times \frac{4}{7} \div (-5\frac{1}{7})$

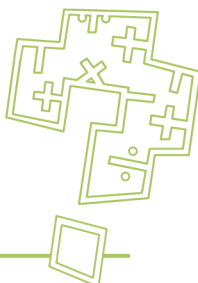
152. $(-3\frac{4}{7}) \div (-1\frac{2}{3}) \times (-\frac{1}{15})$

153. $(-81 - 27 + 63 - 18) \div (-9)$

154. $\left| -2\frac{1}{2} \right| \times \left| -\frac{3}{5} \right| - \left| +\frac{1}{2} \right| \div \left| -\frac{2}{3} \right| - (-3)$

155. $-8 \times [-7 + (1 - \frac{2}{3} \times 0.6) \div (-3)]$

156. $[15\frac{1}{2} - (1\frac{1}{4} \times \frac{3}{5} + 3\frac{1}{2})] \div (-1\frac{1}{8})$



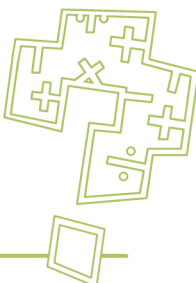
$$157. \quad \frac{1}{5} \times (-5) \div \left(-\frac{1}{5}\right) \times 5$$

$$158. \quad -\left(\frac{1}{3} - \frac{1}{21} + \frac{3}{14} - \frac{2}{7}\right) \div \left(-\frac{1}{42}\right)$$

$$159. \quad -13 \times \frac{2}{3} - 0.34 \times \frac{2}{7} + \frac{1}{3} \times (-13) - \frac{5}{7} \times 0.34$$

$$160. \quad (-13) \times (-134) \times \frac{1}{13} \times \left(-\frac{1}{67}\right)$$

$$161. \quad (-16 - 50 + 3) \div (-2)$$



$$162. \quad 0.7 \times 1\frac{4}{9} + 2\frac{3}{4} \times (-15) + 0.7 \times \frac{5}{9} + \frac{1}{4} \times (-15)$$

$$163. \quad \left(1\frac{4}{5} - 2\frac{5}{6} - \frac{8}{15}\right) \times 60$$

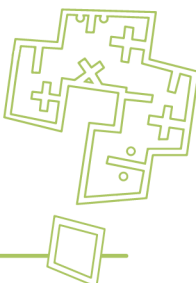
$$164. \quad (-42) \div 3\frac{1}{2} - \frac{5}{9} \div \left(-\frac{15}{18}\right)$$

$$165. \quad -81 \div 2\frac{1}{4} \div (-16) \times \frac{4}{9}$$

$$166. \quad (-6) \times (-4) + (-32) \div (-8) - 3$$

$$167. \quad (-9) \times (-4) + (-60) \div 12$$

$$168. \quad 19\frac{5}{13} + (-20\frac{3}{17}) + (-302.5) + (-151\frac{14}{17}) + \left(-119\frac{5}{13}\right) + \left(-197\frac{1}{2}\right)$$



$$169. \quad (-3\frac{5}{37}) + [-(+2\frac{11}{148}) + (+5.175) + (-3\frac{3}{37}) + 6.325]$$

$$170. \quad [(-\frac{9}{14}) - 1\frac{5}{7} + \frac{8}{21}] \div (-\frac{1}{42})$$

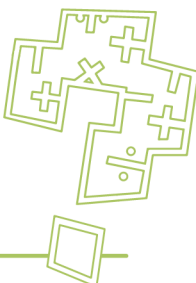
$$171. \quad -|-3| \div 10 - (-15) \times \frac{1}{3}$$

$$172. \quad -1\frac{3}{5} \times (\frac{7}{32} - \frac{5}{16}) \div 2\frac{1}{2}$$

$$173. \quad (2\frac{1}{3} - 3\frac{1}{2} + 1\frac{17}{18}) \div (-1\frac{1}{6}) \times (-7)$$

$$174. \quad -\frac{3}{4} \times (8 - 2\frac{1}{3} - 0.04)$$

$$175. \quad (+3\frac{2}{5}) + (-2\frac{7}{8}) - (+3\frac{5}{12}) - (-5\frac{3}{5}) + (-1\frac{1}{8}) - 5\frac{5}{12}$$



176. $1\frac{2}{3} \times (-1\frac{1}{5})$

177. $(-6.5) \times (-\frac{5}{6})$

178. $(-\frac{3}{4}) \times (-1\frac{1}{2}) \times (-\frac{4}{9})$

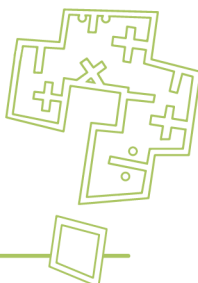
179. $-\frac{5}{6} \times 0.25 \times (-4) \times 9$

180. $(-\frac{5}{6}) \div (-3\frac{1}{3})$

181. $(-3\frac{4}{7}) \div (-1\frac{2}{3}) \div (-1\frac{1}{14})$

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

183. $-3.8 \times 2.4 \times 799.6 \times (-\frac{11}{7}) \times (3^3 - 3 \times 9) \times 88\frac{2}{3}$



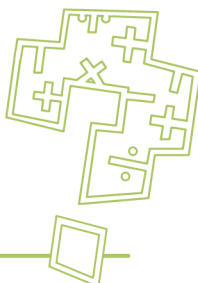
$$184. \quad -8 - [-3.6 - (-0.2) \times (-0.4) \times (-1)]$$

$$185. \quad 3 \times \left[5^2 - 6 + (-8)^2 - 2 \times (-2)^3 \times \frac{1}{4} \right]$$

$$186. \quad -1^5 - [(-0.4) \times (-2.5)]^5$$

$$187. \quad (-1)^{25} - (1 - 0.5) \times \frac{1}{3}$$

$$188. \quad 3 - (-2) \times (-1) - 8 \div \left(-\frac{1}{2}\right)^2 \times |-3 + 1|$$



$$189. (-27\frac{9}{11}) \div 9 - (\frac{1}{2} + \frac{2}{3} - \frac{3}{4} - \frac{11}{12}) \times (-24)$$

$$190. -3^2 \times 2 + (-2)^3 \times 3 - 48 \div (-2) + (-2)^6$$

$$191. \left(\left| -3\frac{1}{3} \right| - \left| 2\frac{1}{2} \right| \right) \div \left[-4^2 \times (-0.5)^3 \right] \times (-1\frac{1}{5})^2$$

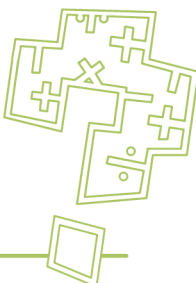
$$192. (-\frac{5}{6}) \div (-3) \times (-1\frac{4}{5}) \times (-2)$$

$$193. \frac{8}{81} \times 6\frac{3}{4} - \frac{2}{7} \div (-1\frac{5}{7}) + (-0.5)^2$$

$$194. \left| 1\frac{1}{3} - 1\frac{1}{2} \right| - \left| 2 \times (-2)^3 \right| + \left| -3 \right|^3$$

$$195. (-\frac{5}{8}) \times (-4)^2 - 0.25 \times (-5) \times (-4)^3$$

$$196. -(-3)^2 \times 2$$

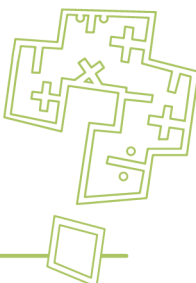


197. $\frac{6}{5} \times \left(-\frac{1}{3} - \frac{1}{2}\right) \div \frac{5}{4}$

198. $(-1.5) + 4\frac{1}{4} + 2.75 + \left(-5\frac{1}{2}\right)$

199. $-8 \times (-5) - 63$

200. $4 - 5 \times \left(-\frac{1}{2}\right)^3$



Calculation with Polynomials

1. $2a - 5b - 3a + b$

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

3. $m^2 + 3mn + 6 - 8m^2 + mn$

4. $-3a^2 + 2ab - 4ab + 2a^2$

5. $(8x - 7x) - (4x - 5y)$

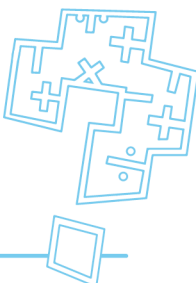
6. $2x^2 - xy - \left(\frac{1}{2}x^2 - xy + 3\right)$

7. $5a^2 + 3b^2 + 2(a^2 - b^2) - (5a^2 - 3b^2)$

8. $m^2 + 8mn - 12 - 4m^2 - 6mn + 9$

9. $5(3a^2b - ab^2) - 3(ab^2 + 5a^2b)$

10. $-2(a^3 - 3b) + (a^3 - b^2)$



11. $4(2y - 3x) - 3(4y - 3x) + \frac{1}{2}x$

12. $-5x + (3x - 1) - 2(3 - x)$

13. $3x^2 - [1 + 2x - (5 + 3x - x^2)]$

14. $2a^2 - [3a - (5a - 2) + 2a^2]$

15. $\frac{2}{3}a^2 - \left(\frac{1}{2}ab - \frac{3}{4}a^2\right) + (ab - b^2)$

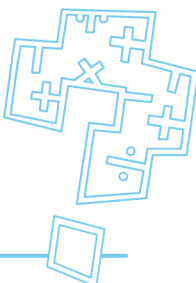
16. $x^2 - \frac{1}{2}y^2 - \left(xy - \frac{3}{2}x^2 + \frac{1}{2}y^2\right)$

17. $2(a^2 - ab) - 2a^2 + 3ab$

18. $12a - 3(4a + 5b) + 2(3a - 4b)$

19. $(2xy - y) - (-y + yx)$

20. $2(2m^2 - 5m) - (3m + 5 - 2m^2)$



21. $2(2a^2 + 9b) + 3(-5a^2 - 4b)$

22. $(3mn - 5m^2) - (3m^2 - 5mn)$

23. $-2(2x^2 - xy) + 4(x^2 + xy - 1)$

24. $3x^2 - [7x - (4x - 3) + 2x^2]$

24. $(2y^2 - ay + 1) - 2(y^2 - 2ay + 3)$

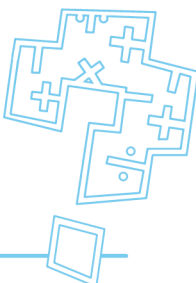
26. $2(2a^2 + 9b) + 3(-5a - 4b)$

27. $(5a^2 + 2a - 1) - 4(3 - 8a + 2a^2)$

28. $3x^2 - [7x - (4x - 3) - 2x^2]$

29. $7a^2b + (-4a^2b + 5ab^2) - (2a^2b - 3ab^2)$

30. $5(a^2b - 3ab^2) - 2(a^2b - 7ab^2)$



$$31. \quad 2(2a^2 + 9b) + 3(-5a^2 - 4b)$$

$$32. \quad 3ab + 2(a^2 - 2ab) - 3(2ab - a^2)$$

$$33. \quad (x^3 - 2y^3 - 3x^2y) - (3x^3 - 3y^3 - 7x^2y)$$

$$34. \quad \left(2x^2 - \frac{1}{2} + 3x\right) - 4\left(x - x^2 + \frac{1}{4}\right)$$

$$35. \quad 4(x^2 + xy - 6) - 3(2x^2 - xy)$$

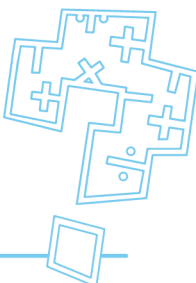
$$36. \quad 2x^2y + 3xy^2 - (6x^2y - 3xy^2)$$

$$37. \quad 3x^2 - \left[5x - \left(\frac{1}{2}x - 3\right) + 2x^2\right]$$

$$38. \quad 3(2a - 3b + c) - 2(-2a + 2b - 3c)$$

$$39. \quad 7a^2b + (-4a^2b + 5ab^2) - (2a^2b - 3ab^2)$$

$$40. \quad 2xy - \frac{1}{2}x^3 + 2xy + 0.5x^3 + \frac{1}{2}$$



41. $(5a^2 + 2a - 1) - 4(3 - 8a + 2a^2)$

42. $\left(2x^2 - \frac{1}{2} + 3x\right) - 4\left(x - x^2 + \frac{1}{2}\right)$

43. $ab + [3a^2b - (4a^2b + ab)] - 4a^2b + 3a^2b$

44. $2(x^3 - 2y^2) - (x - 2y) - (x - 3y^2 + 2x^3)$

45. $(-x^2 + 2xy - y^2) - 2(xy - 3x^2) + 3(2y^2 - xy)$

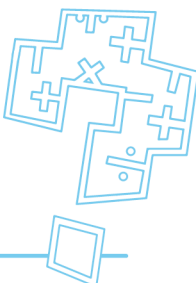
46. $6ab - 2(-3b + 2a) + 3(-2ab - 5a)$

47. $4x^2y - [6xy - 3(4xy - 2) - x^2y] + 1$

48. $3\left[\frac{4}{3}a - \left(\frac{2}{3}a - \frac{1}{3}\right)\right] - \frac{3}{2}a$

49. $\frac{1-2x}{3} - \frac{3-x}{4}$

50. $3a + 4\left(a - \frac{1}{2}b\right) - 2(3a + b)$



$$51. -\frac{5}{3}ab^3 + 2a^3b - \frac{9}{2}a^2b - ab^3 - \frac{1}{2}a^2b - a^3b$$

$$52. 7xy + xy^3 + 4 + 6x - \frac{2}{5}xy^3 - 5xy - 3$$

$$53. \frac{1}{2}m - 2\left(m - \frac{1}{3}n^2\right) - \left(\frac{3}{2}m - \frac{1}{3}n^2\right)$$

$$54. 3x^2y - \left[2xy - 2\left(xy - \frac{3}{2}x^2y\right) + xy\right]$$

$$55. (5a^2 + 2a - 1) - 4(3 - 8a + 2a^2)$$

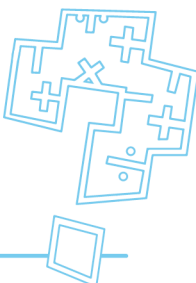
$$56. \frac{1}{3}(-3ax^2 - ax + 3) - \left(-ax^2 - \frac{1}{2}ax - 1\right)$$

$$57. \left(xy - \frac{2}{3}y - \frac{2}{3}\right) - \left(-\frac{1}{2}x - \frac{1}{2}xy + 1\right)$$

$$58. 4(2x^2 - 3x + 1) - 2(4x^2 - 2x + 3)$$

$$59. 3a^2 - (5a^2 - ab + b^2) - (7ab - 7b^2 - 3a^2)$$

$$60. 3x^2 - [7x - 3(4x - 3) - 2x^2]$$



$$61. \left(\frac{1}{3}a^3 - 2a - 6 \right) - \frac{1}{2} \left(\frac{1}{2}a^3 - 4a - 7 \right)$$

$$62. 5ab - 2 \left[3ab - \left(4ab^2 + \frac{1}{2}ab \right) \right] - 5ab^2$$

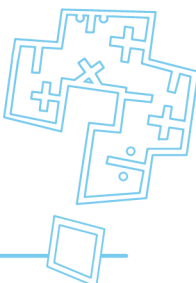
$$63. -5a^2b + 3(3b^2 - a^3b) - 2(-2a^2b + 3b^2 - 3b)$$

$$64. 4x^2y - [6xy - 2(4xy - 2) - x^2y] + 1$$

$$65. (4x^2 - 5xy) - \left(\frac{1}{3}y^2 + 2x^2 \right) + 2 \left(3xy - \frac{1}{4}y^2 - \frac{1}{12}y^2 \right)$$

$$66. (4m^2 - n^2) - [2(mn - n^2 + m^2) - (-2m^2 + 3n^2 + mn)]$$

$$67. \frac{1}{3}(2x - 3y) + \frac{1}{2}(2x - 3y) - \frac{1}{6}(2x - 3y) - \frac{5}{3}(2x - 3y)$$



Calculation with Rational Numbers:

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

2. $-\frac{5}{24}$

3. $\frac{17}{20}$

4. $\frac{44}{15}$

5. $-\frac{39}{20}$

6. 3.36

7. $-\frac{25}{12}$

8. $-\frac{14}{15}$

9. $\frac{101}{36}$

10. -0.4

11. $-\frac{27}{4}$

12. $-\frac{27}{4}$

13. $-\frac{31}{3}$

14. 4

15. 175

16. 24.5

17. $\frac{12}{7}$

18. $45\frac{7}{50}$

19. $-\frac{20}{3}$

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

21. $-\frac{8}{5}$

22. 0

23. $-\frac{79}{3}$

24. -10.08

25. $\frac{347}{100}$

26. 503

27. $-\frac{35}{4}$

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

29. $\frac{441}{110}$

30. $\frac{35}{3}$

31. 154000

32. $-\frac{5}{6}$

33. $\frac{95}{8}$

34. $\frac{62}{13}$

35. $\frac{45}{4}$

36. -25

37. -11

38. -1

39. $\frac{13}{6}$

40. -52

41. 0

42. -6

43. $\frac{1}{6}$

44. 92

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

46. -2^{2002}

47. $-\frac{1}{4}$

48. $-6\frac{1}{2}$

49. $-57\frac{1}{2}$

50. -4

51. 0

52. 4

53. -20

54. -30

55. $4\frac{2}{3}$

56. -7

57. -1060

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

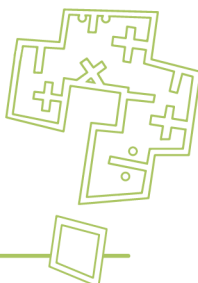
59. 10

60. -27

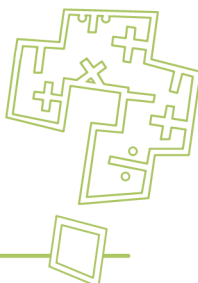
61. $\frac{1}{6}$

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

63. $-\frac{81}{16}$



- | | | |
|----------------------|-----------------------|-------------------------|
| 64. $\frac{1}{8}$ | 88. $4\frac{5}{8}$ | 114. $\frac{5}{4}$ |
| 65. $-\frac{53}{20}$ | 89. -6 | 115. $-\frac{25}{243}$ |
| 66. -261 | 90. -8 | 116. $-\frac{1}{4}$ |
| 67. $4\frac{5}{8}$ | 91. $-1\frac{1}{2}$ | 117. $-\frac{2}{15}$ |
| 68. 1 | 92. 41 | 118. $\frac{16}{15}$ |
| 69. -81 | 93. -25 | 119. -5 |
| 70. $\frac{23}{96}$ | 94. 2 | 120. 49 |
| 71. -4 | 95. 100 | 121. $-\frac{8}{5}$ |
| 72. $-2\frac{1}{2}$ | 96. -6 | 122. $-\frac{42}{25}$ |
| 73. -51 | 97. -250 | 123. $-\frac{3}{8}$ |
| 74. $2\frac{11}{25}$ | 98. $\frac{2}{9}$ | 124. 6 |
| 75. $\frac{125}{3}$ | 99. 5.03 | 125. 0 |
| 76. $-\frac{1}{2}$ | 100. 0 | 126. 64 |
| 77. -8 | 101. -899.5 | 127. $-\frac{85}{84}$ |
| 78. 13 | 102. 1.995 | 128. -486 |
| 79. $24\frac{1}{5}$ | 103. -40 | 129. $-\frac{599}{105}$ |
| 80. 2 | 104. 35.3 | 130. $-\frac{27}{16}$ |
| 81. 45 | 105. $-\frac{64}{45}$ | 131. -29 |
| 82. $\frac{113}{4}$ | 106. -199.5 | 132. $-\frac{61}{18}$ |
| 83. 27 | 107. $-15\frac{1}{6}$ | 133. $-\frac{27}{2}$ |
| 84. 5 | 108. 1245 | 134. 3 |
| 85. $\frac{5}{2}$ | 109. 0 | 135. -1 |
| 86. -7 | 110. -4 | 136. 6 |
| 87. -1 | 111. $\frac{8}{3}$ | |
| | 112. $-\frac{1}{3}$ | |
| | 113. $\frac{1}{7}$ | |



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

138. -80

139. -7

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

141. $2\frac{1}{3}$

142. $-1\frac{5}{9}$

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

144. 260

145. 2580

146. 25

147. -2676

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

149. 3

150. 0

151. $\frac{14}{27}$

152. $-\frac{1}{7}$

153. 7

154. $3\frac{3}{4}$

155. $57\frac{3}{5}$

156. -10

157. 25

158. 9

159. -13.34

160. -2

161. $\frac{63}{2}$

162. -43.6

163. -94

164. $-11\frac{1}{3}$

165. 1

166. 25

167. 31

168. -772

169. $\frac{475}{148}$

170. 83

171. $\frac{47}{10}$

172. $\frac{3}{50}$

173. $\frac{14}{3}$

174. $-\frac{211}{50}$

175. $-3\frac{5}{6}$

176. -2

177. $\frac{65}{12}$

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

179. $\frac{15}{2}$

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

181. -2

182. -1

183. 0

184. -4.48

185. 261

186. -2

187. $-\frac{7}{6}$

188. -63

189. $-\frac{166}{11}$

190. 46

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

192. 1

193. $\frac{13}{12}$

194. $11\frac{1}{6}$

195. -90

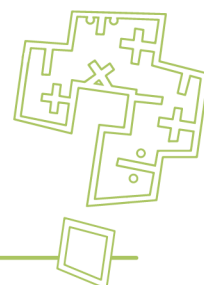
196. -18

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

198. 0

199. -23

200. $4\frac{5}{8}$



Calculation with Polynomials:

1 $-a - 4b$

2 $-\frac{15}{4}mn$

3 $-7m^2 + 4mn + 6$

4 $-a^2 - 2ab$

5 $-3x + 5y$

6 $\frac{3}{2}x^2 - 3$

7 $2a^2 + 4b^2$

8 $-3m^2 + 2mn - 3$

9 $-8ab^2$

10 $-a^3 - b^2 + 6b$

11 $-4y - \frac{5}{2}x$

12 -7

13 $2x^2 + x + 4$

14 $2a - 2$

15 $\frac{17}{12}a^2 + \frac{1}{2}ab - b^2$

16 $\frac{5}{2}x^2 - y^2 - xy$

17 ab

18 $6a - 23b$

19 xy

20 $6m^2 - 13m - 5$

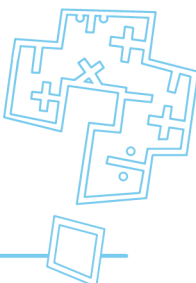
21 $-11a^2 + 6b$

22 $-8m^2 + 8mn$

23 $6xy - 4$

24 $x^2 - 3x - 3$

25 $3ay - 5$



26 $4a^2 - 15a + 6b$

27 $-3a^2 + 34a - 13$

28 $5x^2 - 3x - 3$

29 $a^2b + 8ab^2$

30 $3a^2b - ab^2$

31 $-11a^2 + 6b$

32 $5a^2 - 7ab$

33 $-2x^3 + y^3 + 4x^2y$

34 $6x^2 - x - \frac{3}{2}$

35 $-2x^2 + 7xy - 24$

36 $-4x^2y + 6xy^2$

37 $x^2 - \frac{9}{2}x - 3$

38 $10a - 13b + 9c$

39 $a^2b + 8ab^2$

40 $4xy + \frac{1}{2}$

41 $-3a^2 + 34a - 13$

42 $6x^2 - x - \frac{5}{2}$

43 $-2a^2b$

44 $-y^2 - 2x + 2y$

45 $5x^2 + 5y^2 - 3xy$

46 $6b - 19a$

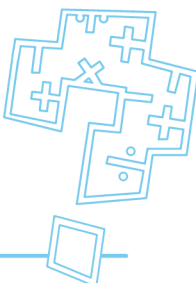
47 $5x^2y + 6xy - 5$

48 $\frac{1}{2}a + 1$

49 $-\frac{5}{12}x - \frac{5}{12}$

50 $a - 4b$

51 $-\frac{8}{3}ab^3 + a^3b - 5a^2b$



52 $\frac{3}{5}xy^3 + 2xy + 6x + 1$

65 $2x^2 - y^2 + xy$

53 $n^2 - 3m$

66 $4n^2 - mn$

54 $-xy$

67 $-2x + 3y$

55 $-3a^2 + 34a - 13$

56 $\frac{1}{6}ax + 2$

57 $\frac{3}{2}xy + \frac{1}{2}x - \frac{2}{3}y - \frac{5}{3}$

58 $-8x - 2$

59 $a^2 + 6b^2 - 6ab$

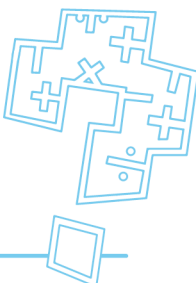
60 $5x^2 + 5x - 9$

61 $\frac{1}{12}a^3 - \frac{5}{2}$

62 $3ab^2$

63 $-3a^3b - a^2b + 3b^2 + 6b$

64 $5x^2y + 2xy - 3$





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