


mathsquad^{TERM 1}

- year 7 Preparation -

SOLUTIONS

name: _____

Welcome to the Year 7 Preparation Skills Program. These sheets are designed to give you multiple opportunities to learn and revise key mathematical skills. Completing these sheets will help you become equipped with the skills you need to be a successful user of mathematics in secondary school and also every day life. The following points will help you get the most out of the program. Enjoy!

- When you see the  symbol include some working to support your answer. This could involve a calculation, annotating a diagram or an explanation of your thought process.
- You may be able to complete very few questions or almost all of them, it doesn't matter. As long as you give your best effort and try to improve each time you are maximising your success!
- If you feel that some or all of these questions aren't suitable for you, have a chat with your teacher.

In most cases you will complete one sheet each week. To further support your learning your teacher may set additional tasks for you to complete. If your school has a Mathsquad Subscription this task could require you to access your school's Mathsquad skill development page. Your teacher will inform you of your school's webpage URL and password. Please write these down in the space below for easy reference.

Webpage: _____


Password: _____

Time to get started on Sheet 1. Turn the page and complete the questions on pages 2 and 3.

Step 1: ★ Start a timer ★ Complete the 90 times tables questions ★ Stop the timer ★ Record your time.

- | | | | | |
|--------------------------|------------------------|--------------------------|--------------------------|--------------------------|
| 1. $11 \times 4 = 44$ | 19. $5 \times 5 = 25$ | 37. $7 \times 11 = 77$ | 55. $6 \times 7 = 42$ | 73. $3 \times 3 = 9$ |
| 2. $10 \times 4 = 40$ | 20. $9 \times 9 = 81$ | 38. $4 \times 9 = 36$ | 56. $5 \times 8 = 40$ | 74. $6 \times 0 = 0$ |
| 3. $1 \times 8 = 8$ | 21. $11 \times 2 = 22$ | 39. $2 \times 1 = 2$ | 57. $10 \times 2 = 20$ | 75. $8 \times 6 = 48$ |
| 4. $4 \times 6 = 24$ | 22. $4 \times 12 = 48$ | 40. $0 \times 5 = 0$ | 58. $8 \times 7 = 56$ | 76. $4 \times 1 = 4$ |
| 5. $6 \times 10 = 60$ | 23. $10 \times 0 = 0$ | 41. $12 \times 9 = 108$ | 59. $2 \times 4 = 8$ | 77. $4 \times 4 = 16$ |
| 6. $11 \times 9 = 99$ | 24. $6 \times 6 = 36$ | 42. $11 \times 1 = 11$ | 60. $1 \times 12 = 12$ | 78. $10 \times 9 = 90$ |
| 7. $4 \times 0 = 0$ | 25. $3 \times 2 = 6$ | 43. $2 \times 7 = 14$ | 61. $5 \times 6 = 30$ | 79. $6 \times 3 = 18$ |
| 8. $3 \times 11 = 33$ | 26. $0 \times 1 = 0$ | 44. $7 \times 3 = 21$ | 62. $3 \times 0 = 0$ | 80. $11 \times 5 = 55$ |
| 9. $12 \times 11 = 132$ | 27. $12 \times 3 = 36$ | 45. $2 \times 8 = 16$ | 63. $9 \times 5 = 45$ | 81. $4 \times 5 = 20$ |
| 10. $10 \times 10 = 100$ | 28. $9 \times 3 = 27$ | 46. $10 \times 5 = 50$ | 64. $1 \times 1 = 1$ | 82. $1 \times 6 = 6$ |
| 11. $4 \times 8 = 32$ | 29. $6 \times 9 = 54$ | 47. $5 \times 1 = 5$ | 65. $9 \times 7 = 63$ | 83. $7 \times 5 = 35$ |
| 12. $8 \times 8 = 64$ | 30. $2 \times 5 = 10$ | 48. $0 \times 2 = 0$ | 66. $9 \times 0 = 0$ | 84. $3 \times 10 = 30$ |
| 13. $0 \times 11 = 0$ | 31. $3 \times 4 = 12$ | 49. $12 \times 12 = 144$ | 67. $2 \times 2 = 4$ | 85. $10 \times 8 = 80$ |
| 14. $11 \times 6 = 66$ | 32. $2 \times 6 = 12$ | 50. $2 \times 9 = 18$ | 68. $5 \times 3 = 15$ | 86. $7 \times 4 = 28$ |
| 15. $12 \times 2 = 24$ | 33. $1 \times 7 = 7$ | 51. $3 \times 1 = 3$ | 69. $7 \times 7 = 49$ | 87. $0 \times 7 = 0$ |
| 16. $8 \times 9 = 72$ | 34. $0 \times 12 = 0$ | 52. $7 \times 10 = 70$ | 70. $11 \times 10 = 110$ | 88. $10 \times 1 = 10$ |
| 17. $3 \times 8 = 24$ | 35. $7 \times 12 = 84$ | 53. $10 \times 12 = 120$ | 71. $1 \times 9 = 9$ | 89. $12 \times 8 = 96$ |
| 18. $12 \times 5 = 60$ | 36. $0 \times 8 = 0$ | 54. $11 \times 8 = 88$ | 72. $12 \times 6 = 72$ | 90. $11 \times 11 = 121$ |

Time:

Step 2: ★ Complete the 21 skills questions with your best effort ★ Include working out when you see the  symbol.

1. Fill in the boxes to make each equation true

a. $5 + \boxed{0} = 5$

b. $6 + \boxed{4} = 10$

c. $0 + \boxed{0} = 0$

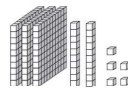
2. a. $3 + 1 = 4$

b. $3 + 9 = 12$


c. $13 + 8 = 21$

d. $26 + 43 = 69$

3. What number is shown below? Use digits then words



325, three hundred and twenty five

4.  $2179 + 212$


2391

5. a. $3 - 3 = 0$

b. $13 - 8 = 5$

c. $85 - 8 = 77$

d. $84 - 25 = 59$

6.  $424 - 231$


193

7. a. $10 \times 1 = 10$


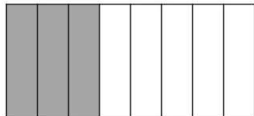

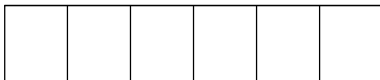



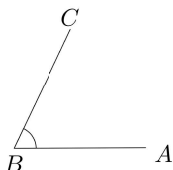

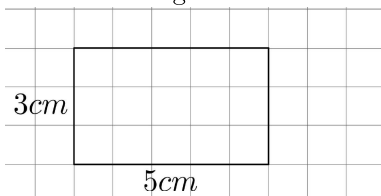

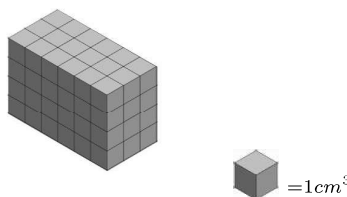
b. $11 \times 3 = 33$

c. $3 \times 8 = 24$

d. $7 \times 8 = 56$

8.  7×661

4627


9. a. $80 \div 10 = 8$ b. $20 \div 2 = 10$ c. $64 \div 8 = 8$ d. $78 \div 8 = 9 \text{ rem. } 6$	10.  $3177 \div 3$ 1059	11. Fill in the boxes to make each equation true a. $2 \times \boxed{48} = 96$ b. $3 \times \boxed{30} = 90$ c. $5 \times \boxed{24} = 120$	12. a. List the factors of 21 1, 21, 3, 7 b. List the first 4 positive multiples of 13 13, 26, 39, 52
13. What fraction is represented in the diagram below?  $\frac{3}{8}$	14.  Calculate $\frac{3}{6} + \frac{2}{6}$. Illustrate your calculation using the rectangle below. $\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$ 	15.  Calculate the following. Illustrate your calculations using the rectangle below. a. $\frac{1}{6}$ of 54 = 9 b. $\frac{5}{6}$ of 54 = 45 	
16. Fill in the box to create an equivalent fraction $\frac{3}{4} = \frac{\boxed{12}}{16}$	17. Write the following as a simplified fraction $\frac{6}{18} = \frac{1}{3}$	18.  Calculate $\frac{5}{6} + \frac{1}{12}$. Please give your answer in simplified form. $\frac{11}{12}$	
19. a. Circle the word that classifies $\angle ABC$ below: acute  straight right acute obtuse b. Estimate the size of angle ABC . $\angle ABC \approx 64 \pm 10$	20.  Determine the perimeter and area of the rectangle below.  $P = 3 + 5 + 3 + 5 = 16\text{cm}$ $A = 3 \times 5 = 15\text{cm}^2$	21.  Calculate the volume of the shape below.  $V = 6 \times 3 \times 4 = 72\text{cm}^3$	
Step 3: ★ Complete any additional weekly tasks in the space below ★			

more space from page 22 onwards if needed

Step 1: ★ Start a timer ★ Complete the 90 times tables questions ★ Stop the timer ★ Record your time.

- | | | | | |
|-------------------------|--------------------------|--------------------------|-------------------------|--------------------------|
| 1. $10 \times 1 = 10$ | 19. $5 \times 5 = 25$ | 37. $2 \times 10 = 20$ | 55. $12 \times 7 = 84$ | 73. $3 \times 3 = 9$ |
| 2. $0 \times 8 = 0$ | 20. $8 \times 2 = 16$ | 38. $10 \times 10 = 100$ | 56. $4 \times 8 = 32$ | 74. $12 \times 0 = 0$ |
| 3. $8 \times 8 = 64$ | 21. $7 \times 7 = 49$ | 39. $3 \times 5 = 15$ | 57. $5 \times 1 = 5$ | 75. $9 \times 1 = 9$ |
| 4. $7 \times 5 = 35$ | 22. $6 \times 8 = 48$ | 40. $12 \times 3 = 36$ | 58. $10 \times 0 = 0$ | 76. $8 \times 10 = 80$ |
| 5. $4 \times 7 = 28$ | 23. $12 \times 4 = 48$ | 41. $12 \times 6 = 72$ | 59. $7 \times 9 = 63$ | 77. $5 \times 9 = 45$ |
| 6. $11 \times 11 = 121$ | 24. $1 \times 6 = 6$ | 42. $3 \times 0 = 0$ | 60. $2 \times 3 = 6$ | 78. $1 \times 11 = 11$ |
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| 8. $2 \times 12 = 24$ | 26. $0 \times 11 = 0$ | 44. $9 \times 3 = 27$ | 62. $3 \times 11 = 33$ | 80. $7 \times 1 = 7$ |
| 9. $2 \times 2 = 4$ | 27. $11 \times 8 = 88$ | 45. $1 \times 3 = 3$ | 63. $10 \times 9 = 90$ | 81. $5 \times 12 = 60$ |
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| 17. $7 \times 2 = 14$ | 35. $12 \times 12 = 144$ | 53. $8 \times 7 = 56$ | 71. $10 \times 5 = 50$ | 89. $9 \times 4 = 36$ |
| 18. $9 \times 2 = 18$ | 36. $12 \times 11 = 132$ | 54. $12 \times 1 = 12$ | 72. $2 \times 11 = 22$ | 90. $6 \times 6 = 36$ |

Time:

Step 2: ★ Complete the 21 skills questions with your best effort ★ Include working out when you see the  symbol.

1. Fill in the boxes to make each equation true

a. $\boxed{5} + 0 = 5$

b. $10 + \boxed{0} = 10$

c. $\boxed{0} + 7 = 7$

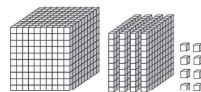
2. a. $0 + 4 = 4$

b. $8 + 3 = 11$


c. $9 + 23 = 32$

d. $48 + 26 = 74$

3. What number is shown below? Use digits then words



1408, one thousand four hundred and eight

4.  $2622 + 797$


3419

5. a. $7 - 2 = 5$

b. $11 - 4 = 7$

c. $42 - 34 = 8$

d. $48 - 16 = 32$

6.  $834 - 553$


281

7. a. $1 \times 3 = 3$


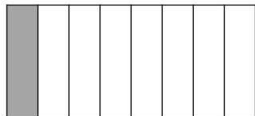

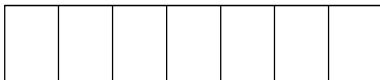

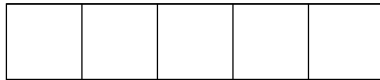

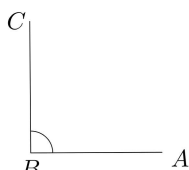

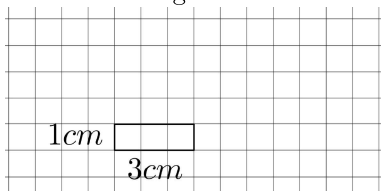

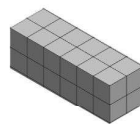

b. $9 \times 11 = 99$

c. $7 \times 3 = 21$

d. $12 \times 7 = 84$

8.  5×547

2735

9. a. $80 \div 8 = 10$ b. $21 \div 7 = 3$ c. $84 \div 12 = 7$ d. $80 \div 7 = 11$ rem. 3	10.  $8456 \div 8$ 1057	11. Fill in the boxes to make each equation true a. $2 \times \boxed{24} = 48$ b. $3 \times \boxed{17} = 51$ c. $5 \times \boxed{18} = 90$	12. a. List the factors of 44 1, 44, 2, 22, 4, 11 b. List the first 6 positive multiples of 10 10, 20, 30, 40, 50, 60
13. What fraction is represented in the diagram below?  $\frac{1}{8}$	14.  Calculate $\frac{4}{7} + \frac{2}{7}$. Illustrate your calculation using the rectangle below. $\frac{4}{7} + \frac{2}{7} = \frac{6}{7}$ 	15.  Calculate the following. Illustrate your calculations using the rectangle below. a. $\frac{1}{5}$ of 25 = 5 b. $\frac{4}{5}$ of 25 = 20 	
16. Fill in the box to create an equivalent fraction $\frac{9}{10} = \frac{\boxed{36}}{40}$	17. Write the following as a simplified fraction $\frac{8}{56} = \frac{1}{7}$	18.  Calculate $\frac{3}{5} + \frac{3}{10}$. Please give your answer in simplified form. $\frac{9}{10}$	
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Step 3: ★ Complete any additional weekly tasks in the space below ★			

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