BLOOMSM4TH

Makes Maths Fun

Level 7

MULTIPLICATION & DIVISION

Bloomsmath is a comprehensive mathematics program which provides a fun way for every student to be learning to the best of their ability.

By Rachel McCann (B.Teach; B.Ed Hons; M.ED (Special Ed.)

BLOOMSM4TH Makes Maths Fun

Level 7

Multiplication & Division

Level 7 is designed for students in their seventh year at school often called Year 6. Students will select and apply appropriate strategies for multiplication and division.

Knowledge: Students will complete multiplication and division questions and check their answers.

Students who demonstrate proficiency in this activity move on to Comprehension.

STOP

Students stop here as they require additional teacher support to master this activity.

Comprehension: Students will write word sums using multiplication and division and a calculator.

Students who demonstrate proficiency in this activity move on to Application.

STOP

Students stop here if time has run out or they require additional support with this activity.

Application: Students will use their knowledge of factors to play "The Factor Game".

Students who demonstrate proficiency in this activity move on to Analysis.

STOP

Students stop here if time has run out or they require additional support with this activity.

Analysis: Students will answer "The Factor Game" questions.

Students who demonstrate proficiency in this activity move on to Synthesis.

STOP

Students stop here if time has run out or they require additional support with this activity.

Synthesis: Students will expand "The Factor Game" and find move combinations.

Evaluation: Suggested questions provide a starting point for discussions related to Multiplication & Division.

Students may complete more or fewer activities for each learning outcome depending on the time allocated and their strength in the area being covered.

All students should participate in the Evaluation discussion to encourage the use of mathematical language, logical reasoning and reflection on that which they have completed.

Name: _____

Knowledge

Solve each question below and then check your answer using the given methods.

11 x 82 = ____	____ ÷ 11 = 82	____ ÷ 82 = 11
82 x 11 __ ___ _____	11)____	82)____
12 x 30 = ____	____ ÷ 30 = 12	____ ÷ 12 = 30
12 x30 __ ___ _____	30)____	12)____
25 x 75 = _____	_____ ÷ 25 = 75	_____ ÷ 75 = 25
25 x75 ___ ____ _____	25)_____	75)_____
45 x 23 = _____	_____ ÷ 23 = 45	_____ ÷ 45 = 23
45 x23 ___ ____ _____	23)_____	45)_____

Harder Question

1__ x __2 = _____	__8__ ÷ 1__ = __2	__8__ ÷ __2 = 1__
1__ x__2 __0 1___ __8__	__2)__8__	1__)__8__

Let's Try This Again

Progress To Comprehension

MD 7 KN

Knowledge
Comprehension
Application
Analysis
Synthesis
Evaluation

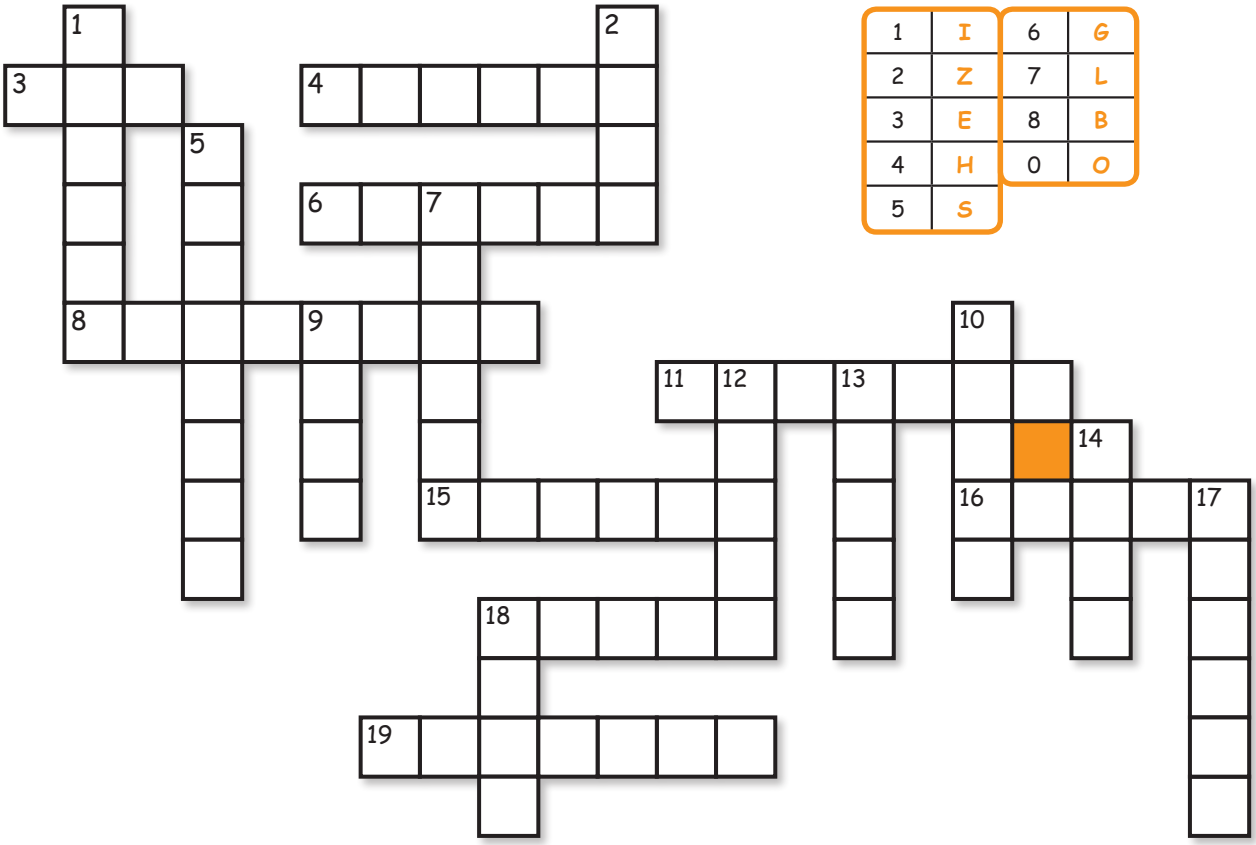
Multiplication & Division - Level 7 - Students will use appropriate strategies for multiplication and division.

BLOOMSMATH

Name: _____

Comprehension

Using a calculator solve each sum below. When you have an answer turn your calculator upside down and the numbers will spell a word. Write each word in its correct place on the crossword. The table below may help also.



1	I	6	G
2	Z	7	L
3	E	8	B
4	H	0	O
5	S		

Across

3. $1 \div 50$
4. $2^3 \times 47077$
6. 127×3943
8. $232036989 \div 3$
11. $2^2 \times 1329701$
15. $5 \times 29 \times 17 \times 151$
16. 5×103^2
18. $54145 \div 7$
19. 46×115603

Down

1. $2^3 \times 3^3 \times 7 \times 11 \times 19$
2. 34×157
5. $3^3 \times 1400599$
7. 3×177239
9. $208278 \div 3^3$
10. $318024 \div (3 \times 3)$
12. $212280 \div 6$
13. $332268 \div 6$
14. $113728 \div 4^2$
17. $5^3 \times 3691$
18. $4.29 \div (2 \times 3)$

Let's Try This Again

Progress To Application

Name: _____

Application

"The Factor Game"

You Will Need:

- A game board per pair.
- 20 counters each of two different coluors.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30

How To Play:

1. Player 1 chooses a number on the board and places a counter on it.
2. Using the other colour, Player 2 covers all the proper factors of Player 1's number except the number itself.
3. Player 2 covers a new number and Player 1 covers all the factors of that number not already covered.
4. This continues until there are no numbers left with uncovered factors.
5. Each player adds up their counters and the player with the most counters wins.
6. If a player selects a number with no uncovered factors they miss a turn.

Let's Try This Again

Progress To Analysis

Name: _____

Analysis

Answer the following questions about "The Factor Game" in the Application section.

After playing the Factor Game a number of times answer the following questions.

1. Which first moves allow Player 2 to score only one point?

_____, _____, _____, _____, _____, _____, _____, _____, _____.

2. What is the name given to the first move numbers listed above?

_____

3. Why do these numbers make good first moves?

_____

4. Which first move would make you miss a turn? Why?

_____

5. What would be the worst possible first move to make?

_____

Name: _____

Synthesis

Use the expanded "The Factor Game" board below and determine the best and worst first moves on this new board.

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	32	33	34	35
36	37	38	39	40	41	42
43	44	45	46	47	48	49

How many times did you play the game? _____

What is the best first move? _____

What is the worst first move? _____

Let's Try This Again

Progress To Evaluation

Evaluation

The following questions and activities are provide as a starting point for fun discussions related to Multiplication & Division. During these conversations students will have an opportunity to use appropriate mathematical language in its correct context, to engage in reflection on the Multiplication & Division activities they have completed and to use logical reasoning to tie their in-class mathematics to its everyday context.

Have students create alternate hard questions for other students to solve.

What do they need to do to make these questions and how do they decide which elements to leave out?

Have students create alternate questions for the crossword so that each division has a matching multiplication question.

Have students suggest other words and questions that could have been included.

Look at what happens if certain numbers, such as 49, are chosen for the enlarged game board and how this affects the game.

What would the next size board game be and how would this affect the game?