

Lesson Plan #5

9's and 7's as Factors

Performance Objective: Working independently, students will be able to solve at least 16 out of 20 multiplication problems correctly with 9 and 7 being factors.

Resources or Materials Needed:

- Pencil
- White board
- PowerPoint of 9's and 7's chant
- Dry erase marker
- Tape Diagram
- Chromebook

Time: 60-90 minutes

Step 1: Pre-Instructional Activities:

- As a class, students will be chanting to skip count by 9's and 7's using a PowerPoint that will be shown to the students
 - Teacher will model the chant for 9's to the melody of Twinkle Twinkle Little Star
 - Class will do the chant for 9's a few times
 - Teacher will model the chant for 7's with the melody of London Bridge is Falling Down
 - Class will do the chant for 7's a few times

Step 2: Content Presentation:

- As a class, we will be working on solving 9 and 7 factors. To start, we will focus of strategies that will help us solve 9 facts.
- To begin, we will start by solving 9×5 .
 - Students solve 9×5 by either skip counting or using a number line.
 - If I can solve 9×5 does that mean I can solve 5×9 ?

- Student comments could be: “Yes, because we can just use commutative property that we learned a couple days ago where one multiplication sentence has the same answer when the factors are switched.”
- As a class, we will discuss how 10’s are easier to solve than solving multiplication facts by 9. Students will probably struggle to solve 9’s but solving 10’s are easy as students are apt to add a zero to whatever factor is being multiplied by 10.
 - Why is it easier to solve equations that have 10 as a factor?
 - Student comments could be: “We know that whatever factor that is multiplied by 10, you just add a zero” or “We already know our 10’s facts”
- Students will now be handed out a tape diagram that shows 10 boxes. Students will then be prompted to write 8 in each box. Students will be asked how many 8’s are within the tape diagram. The teacher will ask students how many eights are in 10×8 , cross 1 eight, and then asked how many eights are in 9×8 .
 - What did we do to get 9×8 ?
 - Response: “We took away an 8”
 - Students will then be shown that we originally had 10×8 and subtracted 1×8 .
 - $9 \times 8 = (10 \times 8) - (1 \times 8)$
 - $10 \times 8 = 80 - 8$
 - Students work with a partner to use the same strategy on 9×7 , 9×6 , 9×9
- Next, we will be working to solve factors that have 7. Students will be working with 7 as a number bond by separating the 7 to 5 and 2. As a class, students should understand their 5’s to which, doing multiplication involving 5’s should come easy. Students will practice

on equations with a factor being 5. Once students have ample time reviewing their 5 facts we will then go into the other number in the number bond, 2. Students will then review their two's. After some time, the class will come together to work on solving 7's.

- As a class, we will discuss how to solve 7×6 .
 - Using our number bond strategy for 7's using 5 and 2, we will first solve 7×6 by solving 5×6 , then 2×6 . Using the answers from both equations, we will add them giving the answer to 7×6 .
 - Practice using this strategy on 7×4 , 7×8 , 7×9

Step 3: Learner Participation:

- Students will play a game on the computer using Quizizz. During this time, students will be playing a couple games that last a couple minutes solving multiplication problems consisting of 9's and 7's as factors.
 - One game will only have 9's as factors
 - Another game will only have 7's as factors

Step 4: Assessment:

Students will be assessed with Quizizz. During this time, students will be instructed to do this quiz as an assessment and to try their best at picking the best answer for the equation. They will have 20 questions to work through to which they will need to have 16 out of the 20 correct.

Step 5: Follow-Through Activities:

- Along with the strategy for 9's, another strategy will be introduced. Students in third grade still have the tendency to use their fingers to count, so using this, students will enjoy the quickness of using their fingers to solve their 9 facts with other single digit factors. Having both hands held up with palms facing out, students will count the factor

they are multiplying 9 by on the fingers starting on the left pinky. If I was to do 9×7 I would count starting on my pinky work my way right until I got to 7, then with that finger down, count the fingers left to the finger down which would give me 6 and then the fingers to the right of the finger down and have 3, leaving with 63 as my answer.

- Practice with different factors

Lesson Plan Summary: In this lesson, the instructions is more teacher directed but students are encouraged to have discussions with partners. Students use whiteboards to solve problems based on the strategy that is being used. Students also access prior knowledge to help them better understand current facts. Cognitivism is present in this lesson as students are constantly building upon what they know from repeated addition to skip counting. (Ertmer, P.A., & Newby, T.J., 2013).

Quizizz Assessment

9/28/2019

7's and 9's multiplication facts | Print - Quizizz



7's and 9's multiplication facts

20 Questions

NAME : _____

CLASS : _____

DATE : _____

1. 9×4

a) 30

c) 42

b) 36

d) 80

2. 9×3

a) 18

c) 26

b) 27

d) 25

3. 9×9

a) 90

c) 80

b) 72

d) 81

4. 9×6

a) 48

c) 45

b) 54

d) 52

5. 9×2

a) 9

c) 18

b) 17

d) 27

6. 9×1

a) 1

c) 0

b) 9

d) 19

7. 9×10

a) 9

c) 90

b) 10

d) 99

8. 7×3

a) 20

c) 14

b) 21

d) 7

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9. 8×7

- a) 56
- c) 64

- b) 54
- d) 60

10. 9×8

- a) 89
- c) 73

- b) 80
- d) 72

11. 7×5

- a) 40
- c) 49

- b) 35
- d) 25

12. 8×9

- a) 27
- c) 72

- b) 26
- d) 54

13. 9×7

- a) 60
- c) 63

- b) 62
- d) 70

14. 9×6

- a) 54

- b) 48

15. 6×7

- a) 49
- c) 42

- b) 35
- d) 41

16. 9×5

- a) 50
- c) 45

- b) 40
- d) 36

17. 7×1

- a) 14
- c) 1

- b) 21
- d) 7

18. 7×4

- a) 24
- c) 35

- b) 8
- d) 28

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19. 7×10

- a) 7
- c) 70

- b) 10
- d) 60

20. 6×9

- a) 54
- c) 42

- b) 45
- d) 48

Answer Key

- | | | | |
|------|-------|-------|-------|
| 1. b | 6. b | 11. b | 16. c |
| 2. b | 7. c | 12. c | 17. d |
| 3. d | 8. b | 13. c | 18. d |
| 4. b | 9. a | 14. a | 19. c |
| 5. c | 10. d | 15. c | 20. a |