Handout 1 (Lesson 1)

"Math Board Game"

Materials:

- **Chalkboard or dry erase board**
- **Chalk or dry erase markers**
- **Handout 1 and 2**
- **Pencils or Pens**

The idea of this activity is to ensure that participants understand how to add 2 digits

Prior to activity:

1. Make copies of Handout 2 (Math Problems for Math Board Game)

Start of Activity

1. When participants arrive distribute:
   - Name Tags
   - Paper to each class member

2. Group participants into teams of 2 or 3

Explain the Math Board Game

1. In this game, students will add 2 digits
2. Briefly review the method to adding 2 digits
3. Give each student paper so they can solve the math problems from their seat
4. Break the students into teams of 2 or 3
5. Break the board up into sections (so that team 1 can write their answers in one section of the board, team 2 can write their answers in another section, and so on).
6. Each team member must go to the board to write the answer. Tell teams to rotate their representative so that each person gets a chance to come to the board. (The representative or rep is the person writing the answer on the board for their team during that particular round).
7. The facilitator will write the 2 digit numbers to be added (from handout 2) on a chalk or dry erase board.

8. The reps (from each team) will write the math problem under their section of the board and solve it. (Reps will add numbers using the method taught in class. If they use a different method, then their answer is disqualified).
9. The rep that writes the correct answer on the board first will win a point.
10. The team with the most points at the end of the game wins.
11. You can add more addition problems if you like.

Handout 2 (Lesson 1)
Math Problems for Math Board Game

1. **10 + 11 = 21**
2. **12 + 14 = 26**
3. **13 + 13 = 26**
4. **66 + 11 = 77**
5. **74 + 22 = 96**
6. **11 + 70 = 81**
7. **20 + 69 = 89**
8. **41 + 57 = 98**
9. **32 + 60 = 92**
10. **21 + 66 = 87**
11. **47 + 50 = 97**
12. **50 + 29 = 79**
13. **75 + 10 = 85**
14. **43 + 22 = 65**
15. **55 + 12 = 67**
16. **69 + 30 = 99**
17. **49 + 60 = 109**
18. **82 + 25 = 107**
19. **32 + 72 = 104**
20. **89 + 20 = 109**
21. **23 + 66 = 89**
22. **35 + 52 = 87**
23. **39 + 80 = 119**
24. **82 + 15 = 97**
25. **65 + 22 = 87**
26. **56 + 11 = 67**
27. **82 + 26 = 108**
28. **55 + 29 = 84**
29. **29 + 73 = 102**
30. **47 + 58 = 105**

Handout 3 (Lesson 2)

"Math Trivia"

Materials:

- **Game Buzzer**
- **Pencils or Pens**
- **Chalkboard or dry erase board**
- **Chalk or dry erase markers**
- **Paper**
- **Handout 3 and 4**

The idea of this activity is to ensure that participants understand how to add 3 digits

Prior to activity:

1. Make copy of Handout 4 (Math Problems for Math Trivia Game)

Start of Activity

1. When participants arrive distribute:
   - Name Tags
   - Paper to each class member

2. Group participants into teams of 2 or 3

Explain the Math Trivia Game

1. In this game, students will add 3 digits
2. Briefly review the method to adding 3 digits
3. Give each student paper so they can solve the math problems from their seat
4. Break the students into teams of 2 or 3
5. The facilitator will use a chalkboard or dry erase board to write 3 digit math problems
6. The facilitator will place the game buzzer on a table for all team representatives to buzz.
7. Each team member must go to board to answer the math questions. Tell teams to rotate their representative so that each person gets a chance to come to the board.
8. The facilitator will write the 3 digit numbers to be added (from handout 4) on a chalk or dry erase board.

9. The reps (from each team) will write the math problem under their section on the board. (Reps will add numbers by using the method taught in class. If they use a different method then their answer is disqualified).
10. Once the rep has completed the math problem on the board, they will run to their team's buzzer and buzz the game buzzer. (This action informs the facilitator that they have completed their problem. The game buzzer must be pressed in order for the team to get a point).
11. If the rep gets the question wrong then the other teams' rep has 7 seconds to write the correct answer and press their game buzzer.
12. The team with the most points at the end of the game wins.
13. You can add more addition problems if you like.

Handout 4 (Lesson 2)
Math Problems for Math Board Game

1. **232 + 711 = 943**
2. **127 + 342 = 469**
3. **668 + 121 = 789**
4. **568 + 420 = 988**
5. **119 + 330 = 449**
6. **734 + 262 = 996**
7. **550 + 224 = 774**
8. **110 + 716 = 826**
9. **224 + 253 = 477**
10. **470 + 500 = 970**
11. **225 + 374 = 599**
12. **289 + 502 = 782**
13. **503 + 892 = 1,395**
14. **320 + 608 = 928**
15. **836 + 240 = 1,076**
16. **297 + 701 = 997**
17. **698 + 301 = 999**
18. **893 + 104 = 997**
19. **413 + 573 = 986**
20. **445 + 253 = 698**
21. **359 + 520 = 879**
22. **363 + 422 = 785**
23. **208 + 691 = 899**
24. **892 + 206 = 1,098**
25. **686+ 422 = 1,108**

Handout 5 (Lesson 3)

"Basketball Math"

Materials:

- **Chalkboard or dry erase board**
- **Chalk or dry erase markers**
- **Trashcan**
- **Handout 5 and 6**
- **Pencils or Pens**
- **Paper**
- **Ball made out of aluminum foil (take 3 sheets of paper, ball it up, and cover it with aluminum foil)**

The idea of this activity is to ensure that participants understand how to subtract 2 digits

Prior to activity:

1. Make copies of Handout 6 (Math Problems for Basketball Game)

Start of Activity

1. When participants arrive distribute:
   - Name Tags
   - Paper to each class member

2. Group participants into teams of 2 or 3

Explain the Math Board Game

1. In this game, students will subtract 2 digits
2. Briefly review the method to subtracting 2 digits
3. Give paper to each class member so that solve problems from their seat
4. Place a clean trash bag in a trashcan. Place the trash can five feet from a shooting spot. (Mark the shooting spot with tape)
5. Break the students into teams of 2 or 3
6. Break the board up into sections (so that team 1 can write their answers in one section of the board, team 2 can write their answers in another section, and so on).
7. Each team member must go to the board to write the answer. Tell teams to rotate their representative so that each person gets a chance to come to the board. (The representative or rep is the person writing the answer on the board for their team during that particular round).
8. The facilitator will write the 2 digit numbers to be subtracted (from handout 6) on a chalk or dry erase board.

9. The reps (from each team) will write the math problem under their section of the board. (Reps will subtract numbers using the method taught in class. If they use a different method, then their answer is disqualified).
10. The rep that writes the correct answer on the board first will win a point.
11. Then the rep has a chance to score another point through basketball
12. The rep must throw the ball in the trashcan. (Students must shoot at least 5 feet from the goal. Use tape to mark the shooting place).
13. The team with the most points at the end of the game wins.
14. You can add more subtraction problems if you like.

Handout 6 (Lesson 3)
Math Problems for Basketball Math

1. **47 - 23 = 24**
2. **69 - 54 = 15**
3. **78 - 47 = 31**
4. **89-58 = 31**
5. **77 - 66 =11**
6. **82 - 62 = 60**
7. **44 - 23 = 21**
8. **67 - 36 = 31**
9. **89 - 66 = 23**
10. **33 - 12 = 21**
11. **79 - 66 = 13**
12. **75 - 62 = 13**
13. **92 - 71 = 21**
14. **87 - 63 = 24**
15. **69 - 29 = 40**
16. **57 - 43 = 14**
17. **88 - 23 = 65**
18. **46 - 25 = 21**
19. **99 - 13= 86**
20. **26 - 15 = 11**
21. **89 - 76 = 13**
22. **72 - 31 =41**
23. **95 - 43 = 52**
24. **39 - 13 = 26**
25. **75 – 46 = 29**

Handout 7 (Lesson 4)

"Tic Tac Toe"

Materials:

- **Chalkboard or Dry Erase Board**
- **Chalk or dry erase markers**
- **Handout 7 and 8**
- **Pencils or Pens**
- **Paper**

The idea of this activity is to ensure that participants understand how to subtract 3 digits

Prior to activity:

1. Make copies of Handout 8 (Math Problems for Tic Tac Toe Game)

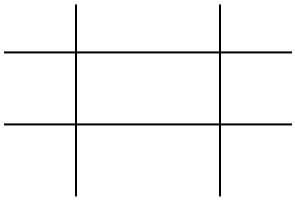
Start of Activity

1. When participants arrive distribute:
   - Name Tags
   - Paper to each class member

2. Group participants into teams of 2 or 3

Explain the Math Board Game

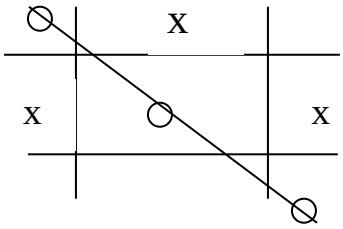
1. In this game, students will subtract 3 digits
2. Briefly review the method to subtracting 3 digits
3. Give paper to each student so they can solve math problems from their seat
4. Draw a Tic Tac Toe Board on the chalkboard or dry erase board. An example is below…



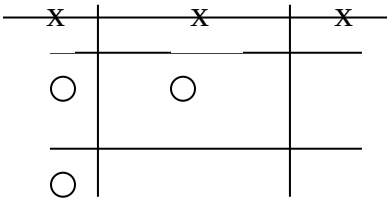
5. Break the students into 2 teams
6. Assign each team an X or an O. (If you have 4 teams, then you can have 1 set of 2 teams playing tic tac toe against each other and the other set of 2 teams

playing tic tac toe against each other.) (In other words, you can have 2 games going on at the same but with all teams working on the same math problem)

7. Break the chalkboard or dry erase board up into sections (so that team 1 can write their answers in one section of the board, team 2 can write their answers in another section, and so on).
8. Each team member must go to the board to write the answer. Tell teams to rotate their representative so that each person gets a chance to come to the board. (The representative or rep is the person writing the answer on the board for their team during that particular round).
9. The facilitator will write the 3 digit numbers to be subtracted (from handout 8) on a chalk or dry erase board.
10. The reps (from each team) will write the math problem under their section of the board. (Reps must use the method the instructor taught then to answer the questions. If not, then their answer is disqualified).
11. The rep that writes the correct answer first will choose their position on the tic tac toe board. (The object of Tic Tac Toe is have X's or O's repeated 3 times consecutively across the board) View below….



The O's have won this game.



The X's have won this game

12. Once a team has won a Tic Tac Toe game, then they earn a point.
13. After a team has won a game, draw another Tic Tac Toe Board and start over.
14. The team with the most points at the end of the game wins.
15. You can add more subtraction problems if you like.

Handout 8 (Lesson 4)
Math Problems for Tic Tac Toe Math

1. **465 - 232 = 233**
2. **693 - 573 = 120**
3. **781 - 731 = 50**
4. **647 – 316 = 331**
5. **484 - 363 = 121**
6. **829 – 801 = 28**
7. **442 - 231 = 211**
8. **614 - 504 = 110**
9. **854 - 232 = 622**
10. **332 - 121 = 211**
11. **728 - 212 = 516**
12. **608 - 508 = 100**
13. **943 - 432 = 511**
14. **878 - 666 = 212**
15. **634 - 213 = 421**
16. **575 - 451 = 124**
17. **857 - 244 = 613**
18. **476 - 250 = 226**
19. **997 - 136= 861**
20. **268 - 154 = 114**
21. **875 - 760 = 115**
22. **723 - 302 = 421**
23. **950 - 420 = 530**
24. **375 - 180 = 95**
25. **794 – 597 = 297**

Handout 9 (Lesson 5)

"Jeopardy Review Game"

Materials:

- **Chalkboard or dry erase board**
- **Chalk or dry erase markers**
- **Handout 9, 10, and 11**
- **Pencils or Pens**

The idea of this activity is to ensure that participants understand how to add 2 digits, add 3 digits, subtract 2 digits, and subtract 3 digits.

Prior to activity:

1. Write on a flipchart or chalkboard the Jeopardy chart on Handout 10
2. Make copies of Handout 11 (Math problem for Jeopardy Review Game)

Start of Activity

1. When participants arrive distribute:
   - Name Tags
   - Paper to each class member

2. Group participants into teams of 2 or 3
3. Hang up the Jeopardy Math Chart you made from Handout 10

Explain the Math Board Game

1. In this game, students will review addition and subtraction concepts
2. Briefly review the method to adding 2 and 3 digits numbers and subtracting 2 and 3 digits numbers
3. Break the students into teams of 2 or 3
4. Decide which team will go first, second, third, and so on
5. Students will pick the category and question value of the question they would like to answer.
6. Let's say team 1 picks the "Adding 2 digit category" and question value 3. Then a rep from team 1 will work out the problem on the board (using the method taught in class).
7. If the rep from team 1 gets the question wrong then team 2 has a chance to steal the points if they answer the question correctly
8. If team 1 gets the question right then they will get those points.
9. The next question will go to team 2.
10. The team with the most points at the end of the game wins.

11. You can also wager. Give each team a math problem. Tell students they can wager between 1-10 points. Each team should pick a representative to come to the board and work the math problem. The representative who writes the correct answer on the board first is the team that gets the points they wager. For example, if team 1's representative gets the correct answer and they wager 6 points, then they gets 6 points. Let's say team 2 wagers 9 points, then the facilitator should subtract 9 points from their score.
12. You may add more math problems if you like.

Handout 10 (Lesson 5)

"Jeopardy Review Game"

Jeopardy Math Chart

Adding 2 digits	Adding 3 digits	Subtracting 2 digits	Subtracting 3 digits
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10

Handout 11 (Lesson 5)

"Jeopardy Review Game" Math Problems

Adding 2 digits

1. **34 + 42 = 76**
2. **85 + 13 = 98**
3. **25 + 54 = 79**
4. **68 + 21 = 89**
5. **89 + 70 = 159**
6. **82 + 63 = 145**
7. **93 + 60 = 153**
8. **74 +15 = 89**
9. **35 + 44 = 79**
10. **95 + 91 = 186**

Adding 3 digits

1. **125 + 312 = 437**
2. **462 + 523 = 985**
3. **591 + 702 = 1,292**
4. **823 + 262 = 1,085**
5. **692 + 405 = 1,097**
6. **396 + 601 = 997**
7. **817 + 162 = 979**
8. **566 + 210 = 776**
9. **563 + 234 = 797**
10. **571 + 402 = 973**

Subtracting 2 digits

1. **23 – 11 = 12**
2. **68 – 42 = 26**
3. **58 – 41 = 17**
4. **48 – 24 = 24**
5. **88 – 47 = 41**
6. **66 – 25 = 41**
7. **76 – 53 = 23**
8. **99 – 42 = 57**
9. **62 – 32 = 30**

10. 96 – 78 = 18

Subtracting 3 digits

1. **189 - 171 = 18**
2. **279 - 145 = 232**
3. **359 - 231 = 128**
4. **592 - 481 = 111**
5. **901 – 589 = 312**
6. **693 – 386 = 307**
7. **894 – 683 = 211**
8. **993 – 888 = 105**
9. **794 – 589 = 205**
10. **903 – 419 = 484**

Handout 12 (Lesson 6)

"SOS"

Materials:

- **Chalkboard or dry erase board**
- **Chalk or dry erase markers**
- **Handout 12 and 13**
- **Pencils or Pens**
- **Paper**

The idea of this activity is to ensure that participants understand how to cross multiply

Prior to activity:

1. Make copies of Handout 14 (Math Problems for SOS Game)

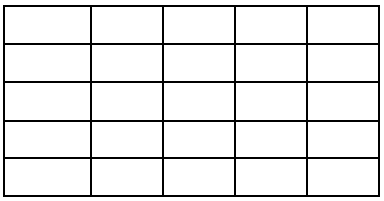
Start of Activity

1. When participants arrive distribute:
   - Name Tags
   - Paper to each class member

2. Group participants into teams of 2 or 3

Explain the SOS Game

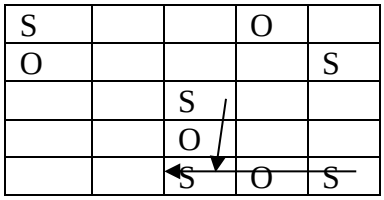
1. In this game, students will cross multiply 2 digits
2. Briefly review the method to multiply 2 digits
3. Break the students into teams of 2 or 3
4. Draw the blank SOS chart on the board (view below)



5. Break the board up into sections (so that team 1 can write their answers in one section of the board, team 2 can write their answers in another section, and so on).
6. Each team member must go to the board to write the answer. Tell teams to rotate their representative so that each person gets a chance to come to the

board. (The representative or rep is the person writing the answer on the board for their team during that particular round).

7. The facilitator will write the 2 digit numbers to be multiplied (from handout 13) on a chalk or dry erase board.
8. The reps (from each team) will write the math problem under their section of the board. (Reps will cross multiply numbers. If you see the students multiply numbers any other way, then their answer is disqualified).
9. The rep that writes the correct answer first will choose their position on the SOS board. (The object of SOS is to keep making SOS's on the board). Each team can only write one S or one O one board. Teams must keep writing an S or an O until they make an SOS on the board (View SOS board)



SOS board

10. Once a team rep has written their answer correctly first on the board, they can choose where to write their S or O (view diagram above)
11. Each team wants to get an SOS however, they want to prevent other teams from getting SOS.
12. All teams are writing their S's and O's on the same board.
13. Once a team has completed an SOS then they get a point.

Handout 13 (Lesson 6)
Math Problems for SOS Cross Multiplication

1. **12 x 13 = 156**
2. **18 x 11 = 198**
3. **19 x 11 = 209**
4. **23 x 12 = 276**
5. **32 x 10 = 320**
6. **24 x 12 = 288**
7. **10 x 41 = 410**
8. **43 x 13 = 559**
9. **21 x 20 = 420**
10. **33 x 11 = 363**
11. **21 x 34 = 714**
12. **14 x 13 = 182**
13. **40 x 29 = 1160**
14. **55 x 38 = 2090**
15. **20 x 19 = 380**
16. **17 x 21 =359**
17. **18 x 40 = 720**
18. **46 x 30 = 1290**
19. **11 x 25= 275**
20. **24 x 22 = 528**
21. **31 x 50 = 1550**
22. **45 x 22= 990**
23. **41 x 42 = 1722**
24. **35 x 50 = 1750**
25. **32 x 77 = 2464**

Handout 14 (Lesson 7)

"Hangman"

Materials:

- **Chalkboard or dry erase board**
- **Chalk or dry erase markers**
- **Handout 14 and 15**
- **Pencils or Pens**

The idea of this activity is to ensure that participants understand how to multiply by 11.

Prior to activity:

1. Make copies of Handout 15 (Math Problems for Hangman Game)

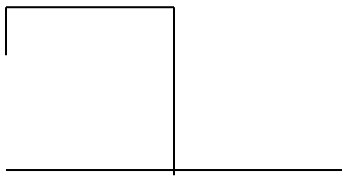
Start of Activity

1. When participants arrive distribute:
   - Name Tags
   - Paper to each class member

2. Group participants into teams of 2 or 3

Explain the Hangman Game

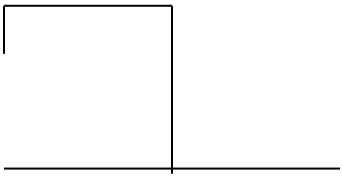
1. In this game, students will multiply by 11
2. Briefly review the method to multiplying by 11
3. Give each student paper so they can solve problems from their seat
4. Break the students into teams of 2 or 3
5. Draw a hangman chart for each team on the board (view below)



6. Break the board up into sections (so that team 1 can write their answers in one section of the board, team 2 can write their answers in another section, and so on).
7. Each team member must go to the board to write the answer. Tell teams to rotate their representative so that each person gets a chance to come to the board. (The representative or rep is the person writing the answer on the board for their team during that particular round).
8. The facilitator will write the 2 digit numbers to be multiplied (from handout 15) on a chalk or dry erase board.
9. The reps (from each team) will write the math problem under their section of the board. (Reps will multiply numbers using the method they have just been taught). If you see the students using another method, then their answer is disqualified).
10. The rep that writes the correct answer on the board first will get a point. They will also draw the beginnings of the hangman on the opposing side (which is labeled 2 on the hang man drawing on the next page).
11. Then both teams will send another rep up to do another problem (repeat steps 7-8). If the same team that got the previous problem correct wins then they will move on to step 3 in the hangman diagram. If the other team wins then they will do step 2 of the hangman diagram.
12. The first to get to step 5 on the hangman drawing board will get a point.
11. Repeat steps 6-10. The team with the most points at the end of the game wins.

Hang Man Drawing Diagram

1.



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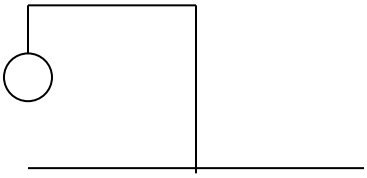

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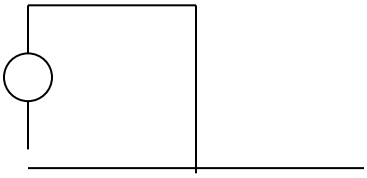

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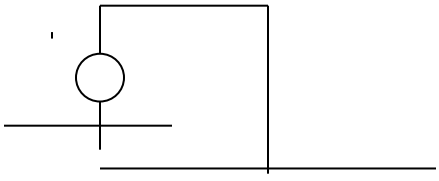

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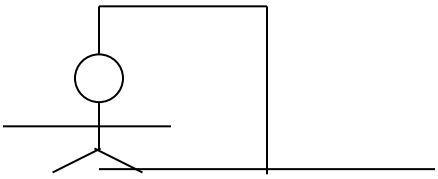


Handout 15 (Lesson 7)
Math Problems for Multiplication by 11

1. **12 x 11 = 132**
2. **14 x 11 = 154**
3. **19 x 11 = 209**
4. **22 x 11 = 242**
5. **32 x 11 = 352**
6. **24 x 11 = 262**
7. **18 x 11 = 198**
8. **44 x 11 = 484**
9. **21 x 11 = 231**
10. **33 x 11 = 363**
11. **25 x 11 = 275**
12. **13 x 11 = 141**
13. **40x 11 = 440**
14. **10 x 11 = 110**
15. **61 x 11 =671**
16. **27 x 11 = 297**
17. **46 x 11 = 506**
18. **11 x 28= 308**
19. **22 x 11 = 242**
20. **31 x 11 = 341**
21. **45 x 11= 495**
22. **41 x 11 = 451**
23. **35 x 11 = 385**
24. **32 x 11 = 352**

Handout 16 (Lesson 8)

"Multiplying by 5"

Materials:

- **Chalkboard or dry erase board**
- **Chalk or dry erase markers**
- **Handout 16 and 17**
- **Pencils or Pens**

The idea of this activity is to ensure that participants understand how to multiply by 5.

Prior to activity:

1. Make copies of Handout 19 (Math Problems for Math Board Game)

Start of Activity

2. When participants arrive distribute:
    - Name Tags
    - Paper for each class member

3. Group participants into teams of 2 or 3

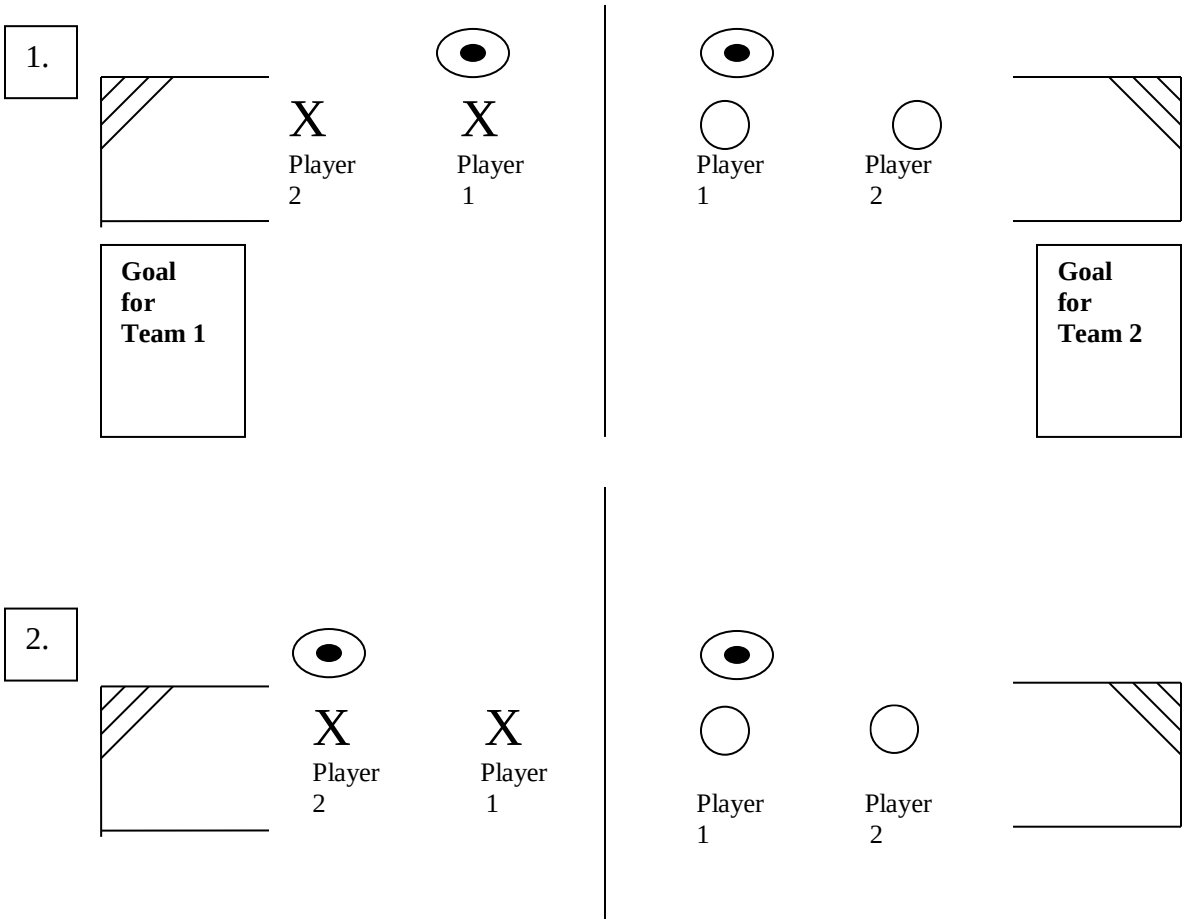
Explain the Soccer Game

1. In this game, students will multiply by 5
2. Briefly review the method to multiplying by 5
3. Break the students into teams 2 teams
4. Assign an X and an O to each team
5. Break the board up into sections (so that team 1 can write their answers in one section of the board, team 2 can write their answers in another section, and so on).
6. Tell a representative from each team to draw the soccer diagram on the board (which is labeled 1 on the next page)
7. Each team member must go to the board to write the answer. Tell teams to rotate their representative so that each person gets a chance to come to the

board. (The representative or rep is the person writing the answer on the board for their team during that particular round).

8. The facilitator will write the numbers to be multiplied (from handout 17) on a chalk or dry erase board.
9. The reps (from each team) will write the math problem under their section of the board. (Reps will multiply numbers using the method they have just been taught). If you see the students using another method, then their answer is disqualified).
10. The rep that writes the correct answer on the board first will get a point. Also, their player 1 will kick the ball to player 2. (this is labeled 2 for the X team on the soccer diagram on the next page).

11. Then both teams will send another rep up to do another problem (repeat steps 7-8). If the same team who got the previous problem correct wins, then their player 2 will kick the ball in the goal (as shown in diagram 3). If the other team wins then their player 1 will kick the ball to player 2.
12. The team who kicks the ball in the goal will get an additional points added to their score.
13. Repeat steps 7-11. The team with the most points at the end of the game wins.



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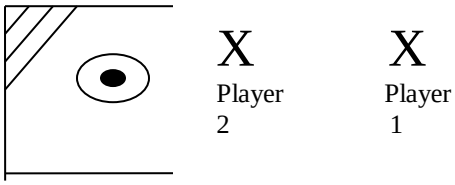
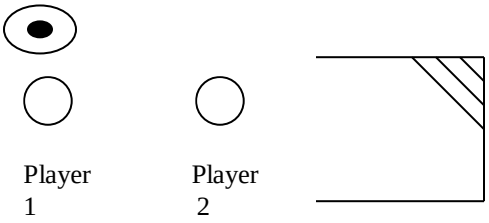


Goal!!!!!



Handout 17 (Lesson 8)
Math Problems for Multiplication by 5

1. **12 x 5 = 60**
2. **14 x 5 = 70**
3. **19 x 5 = 95**
4. **22 x 5 = 110**
5. **20 x 5 = 100**
6. **24 x 5 = 240**
7. **18 x 5 = 90**
8. **44 x 5 = 220**
9. **18 x 5 = 90**
10. **26 x 5 = 130**
11. **15 x 5 = 75**
12. **30 x 5 = 150**
13. **40 x 5 = 200**
14. **10 x 5 = 50**
15. **23 x 5 = 115**
16. **36 x 5 = 180**
17. **62 x 5 = 310**
18. **11 x 5= 55**
19. **50 x 5 = 250**
20. **60 x 5 = 300**
21. **66 x 5= 330**
22. **17 x 5 = 85**
23. **13 x 5 = 65**
24. **70 x 5 = 350**

Handout 18 (Lesson 9)

"Multiplying by 10, 100, 1,000"

Materials:

- **Chalkboard or dry erase board**
- **Chalk or dry erase markers**
- **Handout 20 and 21**
- **Pencils or Pens**

The idea of this activity is to ensure that participants understand how to multiply by 10s, 100s, and 1,000s.

Prior to activity:

1. Make copies of Handout 19 (Math Problems for Math Trivia Game)

Start of Activity

2. When participants arrive distribute:
    - Name Tags
    - Paper to each class member

3. Group participants into teams of 2 or 3

Explain the Math Trivia Game

1. In this game, students will multiply by 10s, 100s, and 1,000s
2. Briefly review the method to multiply by 10s, 100s, and 1,000s
3. Give each student paper so they can solve the math problems from their seat
4. Break the students into teams of 2 or 3
5. The facilitator will use a chalkboard or dry erase board to write the multiplication problems
6. The facilitator will place the game buzzer on a table for all team representatives to buzz.
7. The facilitator will write the multiplication problems (from handout 18) on a chalk or dry erase board.
8. The reps (from each team) will write the math problem under their section on the board. (Student should solve the math problems with the method taught in class. If they do not, then their answer is disqualified).

9. Once the rep has done the math problem on the board, they will run to their team's buzzer and press the game buzzer. (This action informs the facilitator that they have completed their problem. The game buzzer must be pressed and the answer must for correct in order for the team to get a point)
10. If the rep gets the question wrong then the other rep has 7 seconds to write the correct answer and press their game buzzer.
11. The team with the most points at the end of the game wins.
12. You can add more multiplication problems if you like.

Handout 19 (Lesson 9)
Math Problems for Multiplication by 10, 100, 1,000

1. **45 x 10 = 450**
2. **14 x 100 = 1,400**
3. **19 x 10 = 190**
4. **22 x 1000 = 2,200**
5. **25 x 10 = 250**
6. **24 x 10 = 240**
7. **18 x 100 = 1,800**
8. **44 x 1000 = 44,000**
9. **21 x 1,000 = 21,000**
10. **20 x 10 = 200**
11. **25 x 100 = 2500**
12. **30 x 10 = 300**
13. **40 x 100 = 400**
14. **10 x 1000 = 10,000**
15. **22 x 100 =2,200**
16. **36 x 1000 = 36,000**
17. **44 x 10 = 440**
18. **11 x 100= 1100**
19. **50 x 1,000 = 50,000**
20. **60 x 100 = 6,000**
21. **66 x 100= 6600**
22. **17 x 100 = 1,700**
23. **13 x 10 = 130**
24. **15 x 00 = 1,500**

Handout 20 (Lesson 10)

"Squaring by 5"

Materials:

- **Chalkboard or dry erase board**
- **Chalk or dry erase markers**
- **Handout 22 and 23**
- **Pencils or Pens**

The idea of this activity is to ensure that participants understand how to square numbers ending and beginning with 5.

Prior to activity:

1. Make copies of Handout 21 (Math Problems for Basketball)

Start of Activity

2. When participants arrive distribute:
    - Name Tags
    - Paper to each class member

3. Group participants into teams of 2 or 3

Explain the Math Basketball Game

1. In this game, students will square numbers that end in 5 and begin with 5
2. Explain that squaring a number means multiplying it by itself (for example: 23x 23 or 25 x 25)
3. Briefly review the method to squaring numbers that end and begin in 5.
4. Give paper to each student so that solve problems in their seat
5. Place a clean trash bag in a trash can. Place the trash can five feet from a shooting spot. (Mark the shooting spot with tape)
6. Break the students into teams of 2 or 3

7. Break the board up into sections (so that team 1 can write their answers in one section of the board, team 2 can write their answers in another section, and so on).
8. Each team member must go to the board to write the answer. Tell teams to rotate their representative so that each person gets a chance to come to the board. (The representative or rep is the person writing the answer on the board for their team during that particular round).
9. The facilitator will write the number to be squared (from handout 21) on a chalk or dry erase board.
10. The reps (from each team) will write the math problem under their section of the board. (Reps will square numbers using the method they have just been taught). If you see the students using another method, then their answer is disqualified).
11. The rep that writes the correct answer on the board first will get a point.
12. Then the rep will have a chance to score another point through basketball
13. The rep must throw the ball in the trashcan. (Students must shoot at least 5 feet from the goal. Use tape to mark the shooting place).
14. The team with the most points at the end of the game wins.

Handout 21 (Lesson 10)

Math Problems for squaring numbers that end in 5 and begin in 5

1. $45^2 = 2{,}025$
2. $15^2 = 225$
3. $35^2 = 1{,}225$
4. $25^2 = 625$
5. $65^2 = 4{,}225$
6. $55^2 = 3{,}025$
7. $75^2 = 5{,}625$
8. $95^2 = 9{,}025$
9. $5^2 = 25$
10. $85^2 = 7{,}225$
11. $105^2 = 11{,}025$
12. $115^2 = 13{,}225$
13. $52^2 = 2{,}725$
14. $57^2 = 6{,}249$
15. $50^2 = 2{,}500$
16. $59^2 = 6{,}681$
17. $53^2 = 289$
18. $55^2 = 3{,}025$
19. $56^2 = 3{,}136$
20. $51^2 = 2601$
21. $54^2 = 2916$
22. $58^2 = 6316$

Handout 22 (Lesson 11)

"Finding 5% and 10% of numbers"

Materials:

- **Chalkboard or dry erase board**
- **Chalk or dry erase markers**
- **Handout 24 and 25**
- **Pencils or Pens**

The idea of this activity is to ensure that participants understand how to find 5% and 10% of numbers.

Prior to activity:

1. Make copies of Handout 23 (Math Problems for Role play)

Start of Activity

1. When participants arrive distribute:
   - ❑ Name Tags

2. Group participants into teams of 2 or 3

Explain the Percentage Role-Play

1. In this game, students will make up role plays with 5% and 10% in their groups
2. Break the students into teams of 2 or 3
3. Give each group a set of percentages to use in their role plays (view the next page)
4. Briefly review the method to finding 5% and 10% of number
5. Each role play must consist of students teaching or creating an educational game to teach others about 5% and 10%
6. For example, students can role play school or create a math board or relay game to play in the classroom.
7. Each team will present their role-play or game to the class
8. If time is limited have each group present only 2 of the percentages from handout 23 in their role play.

9. Tell students that each role play should only be 3 minutes long

Handout 23

Math Problems for 5% and 10% (Lesson 11)

Group 1

1. **5 % of 20**
2. **5% of 72**
3. **5% of 58**
4. **10% of 60**
5. **10% of 528**

Group 2

1. **5 % of 14**
2. **5% of 88**
3. **5% of 94**
4. **10% of 18**
5. **10% of 896**

Group 3

1. **5 % of 40**
2. **5% of 64**
3. **5% of 82**
4. **10% of 79**
5. **10% of 116**

Group 4

1. **5 % of 16**
2. **5% of 44**
3. **5% of 74**
4. **10% of 66**
5. **10% of 1,098**

Handout 24

Answer Key: Math Problems for 5% and 10% (Lesson 11)

Group 1

1. **5 % of 20 = 1**
2. **5% of 50 = 2.5**
3. **5% of 100 = 5**
4. **10% of 62 = 6.2**
5. **10% of 528 = 52.8**

Group 2

1. **5 % of 30 = 1.5**
2. **5% of 88 = 4.4**
3. **5% of 84 = 4.2**
4. **10% of 18 = 1.8**
5. **10% of 896 = 89.6**

Group 3

1. **5 % of 40 = 2**
2. **5% of 64 = 3.2**
3. **5% of 82 = 4.1**
4. **10% of 79 = 7.9**
5. **10% of 116 = 11.6**

Group 4

1. **5 % of 70 = 3.5**
2. **5% of 44 = 2.2**
3. **5% of 24 =1.2**
4. **10% of 66 = 6.6**
5. **10% of 1,098 = 109.8**

Handout 25 (Lesson 12)

"Jeopardy Review Game"

Materials:

- **Chalkboard or dry erase board**
- **Chalk or dry erase markers**
- **Handout 26 and 27**
- **Pencils or Pens**

The idea of this activity is to ensure that participants understand all the lessons taught in the Simply Outrageous Math program.

Prior to activity:

1. Write on a flipchart or chalkboard the Jeopardy chart on Handout 26
2. Make copies of Handout 26 and 27

Start of Activity

1. When participants arrive distribute:
   - Name Tags
   - Paper to each class member

2. Group participants into teams of 2 or 3
3. Hang up the Jeopardy Math Chart you made from Handout 26

Explain the Jeopardy Review Game

1. In this game, students will review all math lesson
2. Briefly review each lesson in this program
3. Break the students into teams of 2 or 3
4. Give students a copy of the math formula on Handout 27
5. Decide which team will go first, second, third, and so on
6. Students will pick the category and point value of the question they would like to answer.
7. Let's say team 1 picks the "Adding 2 digit category" and point value 3. Then a rep from team 1 will work out the problem (from left to right).
8. If the rep from team 1 gets the question wrong then team 2 has a chance to steal the points if they answer the question correctly
9. If team 1 gets the question wrong then team 2 has a chance to steal the point.
10. The next question will go to team 2.
11. The team with the most points at the end of the game wins.

12. You can also do a wager. Give each team a math problem. Tell students they can between 1-10 points. Each team should pick a representative to come to the board and work the math problem. The representative who writes the correct answer on the board is the team that gets the points they wager. For example, if team 1's representative get the correct answer and they wager 6 point, then they gets 6 points. Let's say team 2 wagers 9 points, then the facilitator should subtract 9 points from their score.
13. You may add more math problems if you like.

Handout 26 (Lesson 12)

"Jeopardy Review Game"

Jeopardy Math Chart

Adding 2 digits	Adding 3 digits	Subtracting 2 digits	Subtracting 3 digits	Cross Multiplication	Multiply by 11	Multiply by 5	Multiply by 10, 100, 1000	Powers That end And begin With 5	5% and 10%
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10

Handout 27 (Lesson 12)

"Jeopardy Review Game" Math Problems

Adding 2 digits

1. **52 + 42 = 94**
2. **85 + 11 = 96**
3. **31 + 58 = 89**
4. **60 + 29 = 89**
5. **89 + 40 = 129**
6. **82 + 74 = 156**
7. **38 + 61 = 99**
8. **74 +85 = 159**
9. **38 + 69 = 107**
10. **95 + 69 = 164**

Adding 3 digits

1. **125 + 134 = 259**
2. **462 + 521 = 983**
3. **591 + 508 = 1,099**
4. **823 + 255 = 1,078**
5. **692 + 405 = 1,097**
6. **396 + 456 = 852**
7. **857 + 385 = 1,232**
8. **789 + 443 = 1,232**
9. **593 + 499 = 1,092**
10. **991 + 178 = 1,169**

Subtracting 2 digits

1. **23 – 10 = 13**
2. **68 – 28 = 48**
3. **58 – 36 = 22**
4. **41 – 32 = 9**
5. **88 – 59 = 29**
6. **66 – 42 = 24**
7. **70 – 57 = 14**
8. **99 – 48 = 51**

9. **62 – 58 = 4**
10. **96 – 74 = 22**

Subtracting 3 digits

1. **189 - 151 = 038**
2. **279 - 105 = 174**
3. **359 - 241 = 118**
4. **592 - 457 = 134**
5. **901 – 501 = 400**
6. **693 – 246 = 447**
7. **894 – 647 = 247**
8. **993 – 584 = 409**
9. **794 – 284 = 510**
10. **903 – 785 = 118**

Cross Multiplication

1. **23 x 16 = 368**
2. **32 x 15 = 480**
3. **24 x 12 = 288**
4. **43 x 18 = 774**
5. **21 x 20 = 420**
6. **33 x 15 = 495**
7. **17 x 21 =359**
8. **18 x 40 = 720**
9. **46 x 30 = 1290**
10. **31 x 50 = 1550**

Multiplication by 11

1. **12 x 11 = 132**
2. **14 x 11 = 154**
3. **19 x 11 = 209**

4. **32 x 11 = 352**
5. **24 x 11 = 262**
6. **18 x 11 = 198**
7. **44 x 11 = 484**
8. **40x 11 = 440**
9. **10 x 11 = 110**
10. **61 x 11 =671**

Multiplication by 5

1. **22 x 5 = 110**
2. **20 x 5 = 100**
3. **24 x 5 = 240**
4. **18 x 5 = 90**
5. **44 x 5 = 220**
6. **18 x 5 = 90**
7. **15 x 5 = 75**
8. **30 x 5 = 150**
9. **40 x 5 = 200**
10. **10 x 5 = 50**

Multiplication by 10, 100, and 1,000

1. **14 x 100 = 1,400**
2. **19 x 10 = 190**
3. **22 x 1000 = 2,200**
4. **30 x 10 = 300**
5. **40 x 100 = 400**
6. **10 x 1000 = 10,000**
7. **22 x 100 =2,200**

8. **36 x 1000 = 36,000**
9. **44 x 10 = 440**
10. **11 x 100= 1100**

Powers that begin and end in 5

1. **45^2 = 2,025**
2. **15^2 = 225**
3. **35^2 = 1,225**
4. **25^2 = 625**
5. **85^2 = 7,225**
6. **57^2 = 6,249**
7. **50^2 = 2,500**
8. **59^2 = 6,681**
9. **53^2 = 289**
10. **55^2 = 3,025**

5% and 10% of numbers

1. **5 % of 20 = 1**
2. **10% of 60 = 6**
3. **10% of 528 = 52.8**
4. **5 % of 24 = 1.2**
5. **5% of 94 = 4.7**
6. **10% of 18 = 1.8**
7. **10% of 896 = 89.6**
8. **5% of 82 = 4.1**
9. **10% of 116 = 11.6**
10. **5% of 74 = 3.7**