

Linear Systems & Inequalities Tournament Review

This Algebra 2 Tournament Review is a fun-filled group tournament for reviewing ***Linear Systems & Inequalities Unit.***

The tournament review activity is a game composed of content relevant questions designed to test the knowledge students gain from class presentations and homework.

Games are played at tables of four students. Most games are simply numbered questions on a handout. A student picks a number card and attempts to answer the question corresponding to the number. A challenge rule permits players to challenge each other's answers.

Standards covered:

CCSS: CCSS: HSA.REI.C.5, HSA.REI.C.6; HSA.REI.C.7; HSA.REI.C.8; HSA.REI.D10; HSA.REI.D.11; HSA.REI.D.12
TEKS: A2.1(A), A2.1(B), A2.1(C), A2.1(E); A2.1(F); A2.1(G), A2.3(A); A2.3(B); A2.3(E); A2.3(F); A2.3(G)

Teaching Suggestions:

- Use the activity as a whole class tournament
- Use the cards as a small group activity
- Use the set of questions as a review prior to assessing students

Unit 2 Review Questions

LINEAR SYSTEMS TOURNAMENT REVIEW

Solve by graphing:

1. $x + 3y = -6$, $x - y = 6$

2. $x - y = -5$, $2x + 2y = 6$

3. $3x - 2y = 8$, $6x - 4y = -12$

4. $x + y = 2$, $4x - y = 8$

5. $-5x + 3y = 9$, $6y = 10x + 18$

Solve by substitution:

6. $x = y + 3$, $3x - 2y = 13$

7. $x + 2y = -15$, $y = x + 6$

8. $x - 4y = -4$, $3x - 8y = -16$

9. $2x + y = 6$, $x - 3y = -18$

10. $x - 2y = -1$, $2x - 7y = 1$

Solve by elimination:

11. $3x + 4y = 20$, $x - 2y = 0$

12. $2x - 3y = $, $4x - 6y = 8$

13. $3x + y = $, $-6x - 2y = 11$

14. $4x + 2y = 14$, $2x + y = 5$

15. $x - 3y = 1$, $3x + 2y = -19$

Solve by any method:

16. $3x + 2y = 12$, $5x - 2y = 36$

17. $5x - 9y = 7$, $-3x + 7y = -5$

18. $y + x = 5$, $y = x - 3$

19. $x - 2y = 6$, $y + 3 = 3x$

20. $4x + y = $, $x - 2y = 16$

Graph the system of inequalities:

21. $y < x$, $y > -x + 3$

22. $x \geq 4$, $y < -2$

23. $2x + 3y \leq 3$, $4x - 2y \leq 4$

24. $y - 2x > 1$, $y - 2x \leq 3$

25. $2y - x \leq 2$, $y - 3x \geq 1$

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Find the maximum and minimum values of the function subject to the given constraints:

26. $x + y \geq 3$, $5x - 3y < $, $6y \leq 2x + 18$, $f(x, y) = 4x + 6y$

27. $x + y \geq 1$, $x - 3y \leq 7$, $4y \leq 6x + 4$, $f(x, y) = 3x + 7y$

28. $x + y \geq 2$, $3x - 6y \leq 8$, $8y \leq x + 16$, $f(x, y) = 2x + 5y$

29. $x + y \geq 1$, $3x - 6y \leq $, $7y \leq 7x + 7$, $f(x, y) = 2x + 6y$

30. $x + y \geq 2$, $5x - 5y \leq 10$, $7y \leq 3x + 14$, $f(x, y) = 3x + 5y$

Solve:

31. $x + y + z = 2$, $x - 2y - z = 2$, $3x + 2y + z = 2$

32. $x + y + z = 6$, $2x - y + 3z = 9$, $-x + 2y + 2z = 9$

33. $x - y + z = 4$, $4x + 2y - 3z = 27$, $x - 3y + 2z = -1$

34. $2x - y + z = 6$, $4x + 2y - 3z = 20$, $x - 3y + 2z = -2$

35. $x + y + z = 0$, $2x + 3y + 2z = -3$, $-x + 2y - 3z = -1$

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PREVIEW

Tournament Review

Tournament Review

Overview

The games are composed of content-relevant questions designed to test the knowledge students gain from class presentations and homework. Games are played at tables of four students. Most games are simply numbered questions on a handout. A student picks a number card and attempts to answer the question corresponding to the number. A challenge rule permits players to challenge each other's answers.

PREPARATION:

- Class set of tournament sheets (usually a practice test)
- Answer sheets (one per table)
- Tournament number cards (one set per table) can be made from 3 × 5 cards or manila folders. I've included an electronic set.

SET UP:

- Assign students to groups using last test, interim grades, etc.
- One student at the table should make a "SCORE SHEET" to record points earned.
- Students should read "Tournament Rules" sheet the first time they play

END OF TOURNAMENT:

- About 7 minutes from the end, tell teams to FINISH THE ROUND. This gives everyone the same number of turns to be GOLDEN. Then it's FAIR!!!
- No one leaves until the room is cleaned up.
- Read results at each table, this prevents score sheets not coming in, and scores filled in incorrectly.
- Figure out the results and prizes (if any) during the last the next day.

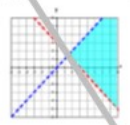
Tournament Rules

1. Fill out a score sheet...a piece of paper with the names of the people in the group.
2. Shuffle the cards.
3. Each person picks a card from the top of the deck. Highest card is the first GOLDEN CHILD. Return cards to the deck.
4. GOLDEN CHILD picks the top card. Everyone works the problem on the tournament sheet that corresponds to the number on the card.
5. The GOLDEN CHILD is first to answer. If they are unsure of the answer, they may guess without penalty.
6. The person to the left of the Golden Child has the option of challenging by giving a different answer. Otherwise, they may pass.
7. Then, the next person may challenge if he or she has a different answer from the first two.
8. CHALLENGERS HAVE TO BE CAREFUL, HOWEVER, BECAUSE THEY LOSE A CARD (IF THEY HAVE ONE) IF THEY ARE WRONG.
9. When everyone has answered, challenged, or passed, the player to the GOLDEN CHILD'S right checks the answer on the answer sheet and reads the right answer aloud.
10. The player who gave the right answer keeps the card. If either challenger gave a wrong answer, he or she must return a previously won card to the deck.
11. If no one gave the correct answer, the card is returned to the deck.
12. Play continues to the left for the next round. So each person takes turns at being the GOLDEN CHILD.
13. Play continues until the deck is exhausted or time runs out.
14. When the game is over, players record the number of cards they won on the Game Score Sheet.



Linear Systems Tournament Answer Key

1. (3, −3)
2. (−1, 4)
3. none
4. (2, 0)
5. infinite
6. (7,4)
7. (−9, −3)
8. (−8, −1)
9. (0, 6)
10. (−3, −1)
11. (4, 2)
12. infinite
13. none
14. $\left(\frac{1}{4}, 4\right)$
15. (−, −2)
16. (6, −
17. $\left(\frac{1}{2}, -\frac{1}{2}\right)$
18. (4, 1)
19. (−2, −9)
20. (2, −7)
21.



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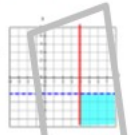

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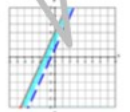

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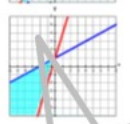

26. Vertices (0, 3) (6, 5) and (3, 0)
max $f(6, 5) = 54$
min $f(3, 0) = 12$
27. Vertices (0, 1) (4, 7) and (1,0)
max $f(4,7) = 61$
min $f(1, 0) = 3$
28. Vertices (0, 2) (8, 3) and (2,0)
max $f(8,3) = 31$
min $f(1, 0) = 2$
29. Vertices (0, 1) (7, 8) and (1,0)
max $f(7,8) = 62$
min $f(1, 0) = 2$
30. Vertices (0, 2) (7, 5) and (2,0)
max $f(7,5) = 46$
min $f(2, 0) = 6$
31. (1, −2, 3)
32. (1, 2, 3)
33. (6, 3,1)
34. (4, 2, 0)
35. (7, −3, −4)

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1	2
3	4
5	6
7	8
9	10

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11	12
13	14
15	16
17	18
19	20

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PREVIEW



My goal is to help you bring balance into your teacher life by providing relevant content, engaging activities, and comprehensive assessments for your high-stakes math course.

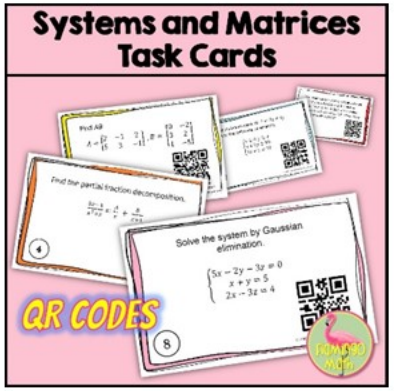
Jean

More Resources for YOU









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TPT

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