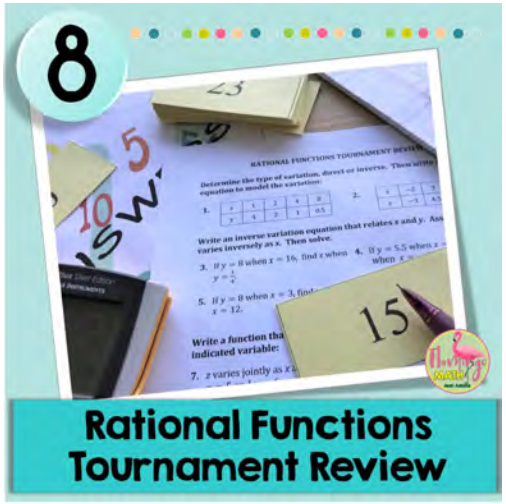

Rational Functions & Graphs Tournament Review

This Algebra 2 Tournament Review is a fun-filled group tournament for ***Rational Functions & Graphs 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: HSA.REI.A.2; HSA.REI.B.3; HSA.CED.A.1; HSA.CED.A.3; HSA.CED.A.4; HSF.BF.A.1; HSF.IF.C.7; HSF.IF.C.7.D; HSA.APR.D.7

TEKS: A2.1(A); A2.1(B); A2.1(E); A2.1(F); A2.2(A); A2.6(G); A2.6(H); A2.6(I); A2.6(J); A2.6(K); A2.6(L); A2.7(F)

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 1 Review Questions

RATIONAL FUNCTIONS TOURNAMENT REVIEW

Determine the type of variation, direct or inverse. Then write an equation to model the variation:

1.

x	1	2	4	8
y	4	2	1	0.5

2.

x	−2	3	6	11
y	−3	4.5	9	16.5

Write an inverse variation equation that relates x and y. Assume that y varies inversely as x. Then solve.

3. If $y = 8$ when $x = 16$, find x when $y = \frac{1}{4}$.

4. If $y = 5.5$ when $x =$ … y when $x =$ …

5. If $y = 8$ when $x = 3$, find y when $x = 12$.

6. …

Write a function t… …s… solve for the indicated variable:

…s x … $z = 2$… … when

…ies j… an … $= 55$ … find z when …5 an…

9. … as th… $y = 50$ wh…

10. … ectly with x an… … $= 4$… … and z … when $x = 16$ an…

Given t… f the function, ide… asymptotes or holes.

11. $y =$ …

12. $y = \frac{x^2+x-30}{x^2-2x-15}$

13. $y = \frac{2x+3}{2x^2-x-6}$

14. $y = \frac{x^2-\ldots}{x-4}$

15. $y = \frac{2x^2+3x+1}{x^2-x-2}$

16. $y = \frac{x^2-4}{x^2+4x+4}$

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Multiply or divide. State any restrictions on the domain.

17. $\frac{3x-6}{5x-20} \cdot \frac{2x-8}{5x-10}$ … $\cdot \frac{x+1}{x^2+2x}$

19. $\frac{3x}{x}$ … $\frac{8}{\ldots}$

20. $6x$… …

21. … $\frac{\ldots y+10}{\ldots -4y}$

2… $\frac{x^2+2\ldots}{2x}$ … $\frac{\ldots +x-12}{\ldots -16}$

… **tate any restric… d…**

… $\frac{8}{3xy^4}$ …

24. $\frac{x}{6x-9} + \frac{\ldots}{2\ldots}$

… $\frac{x+4}{\ldots^2-2x} +$ … $- \frac{x+2}{x^2+3x}$

…:

…0. $\frac{\frac{2}{x}+\frac{3}{\ldots}}{\ldots}$ … $\frac{\ldots}{\frac{\ldots}{x+4}}$

So…

32… … $\frac{\ldots}{3} - \frac{1}{2} = \frac{2x+5}{6}$

34. $\frac{8}{x^2-x} + \frac{8}{x} = \frac{6}{x-2}$

35. Lucas can sort a bag of mail in 3 hours. Kevin can sort the same bag in 2 hours. If they work together, how long will it take them to sort the mail?

36. Arthur can edit 15 essays in 10 hours. Maren needs 15 hours to do the job. If they work together, how long will it take them to edit the essays?

37. A canoe can travel 15 mph in still water. Going with the current, it can travel 20 miles in the same time that it takes to travel 10 miles against the current. Find the rate of the current.

Write an equation for the translation of the graph of $y = \frac{2}{x}$:

38. asymptotes at $x = 3$ and $y = 2$

39. reflect over x-axis asymptote at $y = 1$

40. asymptotes at $x = -1$ and $y = -2$

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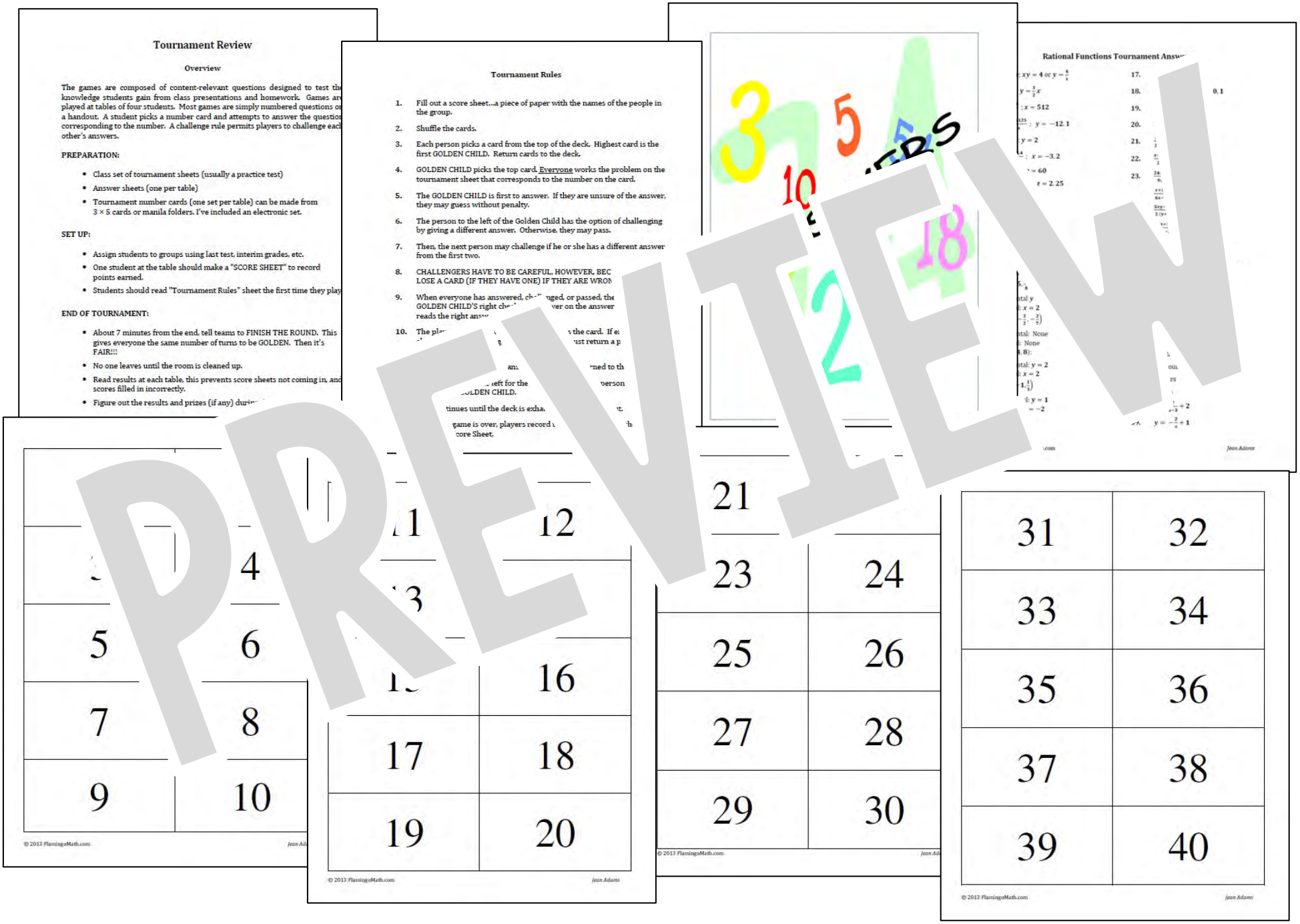
PREVIEW

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) duri

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, BEC LOSE A CARD (IF THEY HAVE ONE) IF THEY ARE WRO
9. When everyone has answered, ch- nged, or passed, the GOLDEN CHILD'S right ch- ver on the answer reads the right ans-
10. The pl- s the card. If e ust return a p

an- ned to th
eft for the erson
GOLDEN CHILD.
tinues until the deck is exha- t.
game is over, players record h
core Sheet.

Rational Functions Tournament Answ-

17.
18. 0, 1
19.
20.
21.
22.
23.

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3	4
5	6
7	8
9	10

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11	12
13	
15	16
17	18
19	20

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21	
23	24
25	26
27	28
29	30

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37	38
39	40

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PREVIEW



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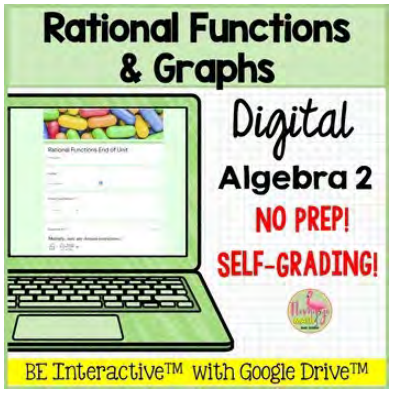
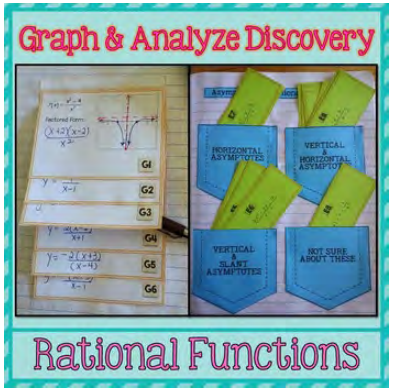
Jean

More Resources for YOU









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