Seating chart on front middle desk:) Find and sit in assigned seat!



Pull out rational/irrational ws to grade

Name

Rational and Irrational Numbers Worksheet Answer Key

- 1. Sort the numbers into 2 groups, rational or irrational. Write the numbers in the appropriate bubble.
- 0.8
- $\sqrt{64}$

- $\sqrt{32}$ -19 $-\sqrt{100}$
- 2.343443444...

T

- $\sqrt{75}$ $6\frac{2}{7}$ $12.6\overline{7}$ $\sqrt{121}$ $\frac{12}{5}$

Rational

$$0.8 \quad \sqrt{64} \qquad 0 \quad -19 \quad 12.6\overline{7}$$
$$-\sqrt{100} \quad \frac{3}{7} \qquad 6\frac{2}{7} \quad \sqrt{121} \quad \frac{12}{5}$$

0 -19
$$12.6\overline{7}$$
 $6\frac{2}{}$ $\sqrt{121}$ $\frac{12}{}$

Irrational

2.343443444...

$$\sqrt{32}$$
 $\sqrt{75}$

 \mathbb{T}

- 2. Sort the numbers into 2 groups, rational or irrational. Write the letter of the problem in the appropriate bubble.
- (a) $\frac{5}{8} + \frac{3}{5}$ (b) $\sqrt{2} \cdot \sqrt{8}$ (c) $-\frac{1}{2} + \sqrt{2}$ (d) $\sqrt{6} + \sqrt{3}$ (e) $\sqrt{2} \cdot \frac{2}{5}$ (f) $-\frac{3}{4} \cdot \frac{2}{9}$

- (g) $\frac{\pi}{2}$
- (h) $5\sqrt{6} \cdot \sqrt{6}$ (i) $1-\pi$

Rational

b, f, h

Irrational

c, d, e, g, i

STATEMENT	ALWAYS, SOMETIMES, OR NEVER TRUE	EXAMPLE JUSTIFICATION
The sum of a rational number and an irrational number is irrational.	Always	$3+\sqrt{3}=3+\sqrt{3}$
The sum of two rational numbers is rational.	Always	2 + 3 = 5
The product of a rational number and an irrational number is irrational.	Sometimes	$0 \cdot \sqrt{3} = 0 \text{ but } 3 \cdot \sqrt{2} = 3\sqrt{2}$
The sum of two irrational numbers is irrational.	Sometimes	$\sqrt{2} + \left(-\sqrt{2}\right)$
The product of two rational numbers is irrational.	Never	5 · 4 = 20
The product of two irrational numbers is irrational.	Sometimes	$\sqrt{2} \cdot \sqrt{4} = \sqrt{8} \text{ but } \sqrt{2} \cdot \sqrt{18} = 6$

Questions from hw yesterday?

1.1 # 1-4, 7-14, 19-25 odds

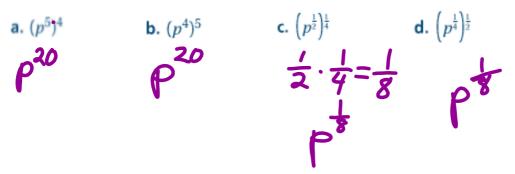
Section 1.2 More Multiplipation Rules for Exponential Rule (pg. 15)



nath

Now you try Got It? (pg. 15)

Got lt? What is the simplified form of each expression in parts (a)-(d)?



(pg. 16)



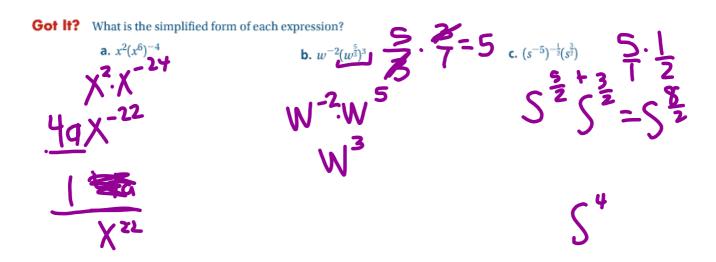
Simplifying an Expression With Powers

What is the simplified form of $y^3(y^{\frac{5}{2}})^{-2}$? $y^3(y^{-5})$ $\frac{5}{2} \cdot \frac{-2}{1} = \frac{-10}{2} = -5$

$$y^{3+-5}$$

$$y^{-2} = \frac{1}{y^2}$$

Now you try Got It? (pg. 16)



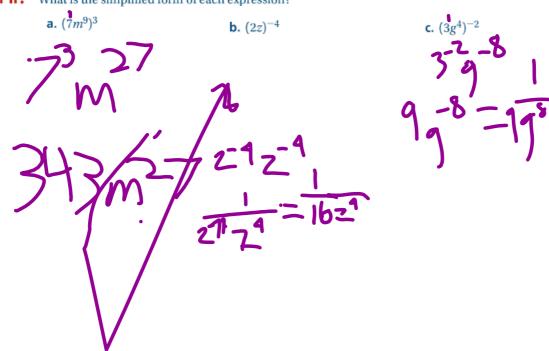
(pg. 17)

Write the simplified form of the expression

Now you try Got It? (pg. 17)

$$5^{-4}a^{-4} = 5^{-4}$$
 $\frac{1}{5^{4}a^{4}} = 625a^{4}$

Got It? What is the simplified form of each expression?



(pg. 18)



Simplifying an Expression With Products

What is the simplified form of $(n^{\frac{1}{2}})^{10} (4mn^{-\frac{2}{3}})^3$?

Now you try Got It? (pg. 18)

Got It? What is the simplified form of each expression?

b.
$$(3c^{\frac{5}{2}})^{4}(c^{2})^{3}$$

3 C C C

What value of x makes the equation true?

$$(r^2)^5 = r^{10}$$

$$(r^2)^5 = r^{10}$$
 $x = 5$

$$(a^{-6})^x = a^5$$
 $x = \frac{-5}{6}$

$$x = -\frac{5}{6}$$

hw 1.2 #s 1-14 (skip 9-10), 20-28 evens due Tues 8/28 (do on separate paper, not in book!)

