

Homework Questions

p.30 #1-18

Homework Assessment
9/1

$$10. \left(-\frac{1}{2}\right)(4r)(-s)$$

Division

notation:

$$\frac{3}{4} \quad \text{or} \quad 3 \div 4$$

Like addition and subtraction, you can convert between multiplication and division

$$3 \cdot \frac{1}{4} = 3 \div 4$$

$$3 \div 4 = 3 \cdot \frac{1}{4}$$

$$3 \cdot 4 = 3 \div \frac{1}{4}$$

$$3 \div \frac{1}{4} = 3 \cdot 4$$

division = multiplying by reciprocal
multiplication = dividing by reciprocal

examples:

reciprocal means flip it.
numerator becomes denominator
denominator becomes numerator

$$-35 \div (-7)(-5) = (5)(-5) = (-25)$$

$$-72 \div \left[-6 \div \left(-\frac{2}{3}\right)\right] = -72 \div \left(-9 \cdot \frac{3}{2}\right)$$

your turn! $= -72 \div (9) = (-8)$

$$1. \quad -100 \div 25 \div -\frac{1}{2} = 8$$

$$2. \quad 24 \div \left(-\frac{2}{3}\right) \left(-\frac{1}{4}\right) \div 27 = 1$$

stuff inside division

when there is a lot going on in the numerator and denominator, simplify each before you do the division

$$\frac{-9 \div -3}{(-1)^2(-3)}$$

$$\frac{(7(2-15) + 1)}{(-(-6)^2 \div 2)}$$

$$\frac{7(-13) + 1}{-36 \div 2}$$

$$\frac{-91 + 1}{-18} = \frac{-90}{-18}$$

(5)

$$\frac{\left[\frac{4}{9} - \left(-\frac{2}{9}\right)\right] \left[\frac{2}{3} - \left(-\frac{2}{3}\right)\right]^2}{\frac{5}{9} \div \left(-\frac{10}{3}\right)}$$

$$\frac{\left(\frac{6}{9}\right) \left(\frac{4}{3}\right)^2}{\frac{5}{9} \cdot \frac{-3}{10}} = \frac{\frac{6}{9} \cdot \frac{16}{9}}{-15/90} = \frac{96/81}{-15/90}$$

$$\frac{\frac{32}{27}}{-1/6} = \frac{32}{27} \div -\frac{1}{6}$$

$$\frac{32}{9 \cdot 27} \cdot \frac{-6}{1} = \frac{-64}{9}$$

your turn!

$$2. \frac{(-12) \left(-\frac{3}{4} - \frac{1}{2}\right)}{\frac{5}{9} \div 10}$$

$$1. \frac{-9(11) + 43}{1 - (-3)^3}$$

what if you can't simplify the numerator to a single term?

divide each term in the numerator by the denominator!

$$\frac{48 - 12x^2}{-3} = \frac{48}{-3} - \frac{-12x^2}{-3} = -18 + 4x^2$$

$$\frac{3 - (-x)^2}{-1}$$

your turn!

$$1. \frac{2x^2 - 5x - 1}{-1}$$

$$2. \frac{8x^3 - 16x + 56}{-8}$$

