

Homework Questions

p.30 #1-18

18, 16, 13,

13. $12(-1)^7(-2)^3$

$$12(-1)(-8) = \textcircled{96}$$

16. $(-9)^2 \underbrace{(-2+2)}_0 (-5) = \boxed{0}$

18. $\frac{(-3)}{1} \left(2a - \frac{2}{3}\right)$

$$-6a + \frac{6}{3}$$

$$-6a + 2$$

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

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

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

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

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

reciprocal means flip it.
numerator becomes denominator
denominator becomes numerator

division = multiplying by reciprocal
multiplication = dividing by reciprocal

examples:

$$\cancel{35} \div (-7)(-5)$$

$$5(-5) = -25$$

$$-72 \div [-6 \div (-\frac{2}{3})]$$

$$-72 \div [-6 \cdot \frac{-3}{2}]$$

$$-72 \div 9 = -8$$

your turn!

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

$$-4 \div \frac{1}{2}$$

$$-4 \cdot 2 = 8$$

$$-100 \cdot \frac{1}{25} \cdot \frac{-2}{1} = \frac{200}{25} = 8$$

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

$$-36(-\frac{1}{4}) \div 27$$

$$9 \div 27 = \frac{1}{3}$$

stuff inside division

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

$$\frac{-9 \div -3}{(-1)^2(-3)} \quad \frac{7(2-15) + 1}{-(-6)^2 \div 2}$$

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

$$\frac{\left(\frac{6}{9}\right) \left(\frac{4}{3}\right)^2}{\frac{5}{9} \cdot \frac{-8}{18}} = \frac{\left(\frac{2}{3}\right) \left(\frac{16}{9}\right)}{-\frac{1}{6}} = \frac{\frac{32}{27}}{-\frac{1}{6}}$$

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

your turn!

$$1. \frac{-9(11) + 43}{1 - (-3)^3} = \frac{-99 + 43}{1 - (-27)} = \frac{-56}{28} = -2$$

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

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

divide each term in the numerator by the denominator!

$$\frac{48 - 12x^2}{-3} = -16 + 4x^2$$

$$\boxed{4x^2 - 16}$$

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

$$\frac{3 - x^2}{-1} = -3 + x^2 = \boxed{x^2 - 3}$$

your turn!

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

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