22.9.15

Real Numbers

Adding and Subtracting Rationals

COMMON DENOMINATOR

(SWITCH ANY "MIXED NUMBERS" TO "IMPROPER" FRACTIONS)

Examples

pg 137

8. $2\frac{1}{8}+\left(-2\frac{3}{4}\right) = \frac{17}{8} - \frac{11}{4} = \frac{17}{8} - \frac{22}{8} = \frac{-5}{8}$

20. $\frac{1}{4}-2\frac{1}{3} = \frac{1}{4} - \frac{7}{3} = \frac{3}{12} - \frac{28}{12} = -\frac{25}{12}$

37. $3\frac{1}{2}-5\frac{1}{3} = \frac{7}{2} - \frac{16}{3}$

$= \frac{21}{6} - \frac{32}{6} = -\frac{11}{6}$

BEDMAS

$$24 - 6 \div 2 + 3 \times 5$$

$$= 24 - 3 + 15$$

$$= 21 + 15$$

$$= 36$$

Examples

1. $8 + 6 \times 2$
2. $18 + 6 \div 2$
3. $-6.5 \times 4 - 8$
4. $\frac{18+6}{5+1} - 4$ (Bar)
5. $9.8 - 1.4 \div 0.7$
6. $7(3 - 2 + 6)$

2: 21

3: -34

4: $\frac{18+6}{5+1} - 4$

$= \frac{24}{6} - 4$

$= 4 - 4$

$= 0$

5) $9.8 - 1.4 \div 0.7$

$9.8 - 2 = 7.8$

pg 142

20. Algebra Evaluate each expression for $a = 3$, $b = 6$, and $c = -\frac{1}{2}$.

a) $a(b+c)$ **b)** $ab+ac$
c) b^2+a **d)** $a\times b\times c$
e) $b\div c\times a$ **f)** $b\times c+3$

$a(b+c) = 3\left(6-\frac{1}{2}\right) = 3(5.5)$

$= 3\left(\frac{12}{2}-\frac{1}{2}\right)$ $= 16.5$

$= 3\left(\frac{11}{2}\right)$

$= \frac{3}{1}\left(\frac{11}{2}\right)$

$= \frac{33}{2}$

c) b^2+a

$= (6)^2+3$

$= 36+3$

$= 39$

21. Algebra Evaluate each expression for $x = 0.5$, $y = 7.2$, and $z = -1.8$.

a) $x(y+z)$ **b)** $xy+xz$
c) $y\div z\times x$ **d)** $x\times y\times z$
e) x^2-z **f)** x^2+y^2

b) $xy+xz$

$= (0.5)(7.2) + (0.5)(-1.8)$

$= 3.6 - 0.9 = 2.7$

f) x^2+y^2

$= (0.5)^2 + (7.2)^2$

$= 0.25 + 51.84$

$= 52.09$

CAREFUL WITH YOUR SIGNS.