Warm-Up

Evaluate the following expressions:

7, 14, 21, 28, ㉟, 42
5, 10, 15, 20, 25, 30, ㉟ 40

1) $-\dfrac{14}{7} + \dfrac{1}{5}$

$\times 5 \left(\dfrac{-70}{35} + \dfrac{7}{35} \right) \times 7$

$\dfrac{-63}{35} = -1\dfrac{28}{35}$

2) $-12.45 + 6.24$

-6.21

3) $-\dfrac{5}{6} \left(-\dfrac{4}{9} \right) - \dfrac{1}{2}$

6, 12, 18
9, 18

$\dfrac{-15}{18} + \dfrac{8}{18} - \dfrac{9}{18}$

$\dfrac{-16}{18} \begin{array}{c} \div 2 \\ \div 2 \end{array} = \dfrac{-8}{9}$

4) $\left(-\dfrac{6}{11} \right) \left(\dfrac{8}{7} \right)$

$\dfrac{T \times T}{B \times B}$

$\boxed{\dfrac{-48}{77}}$

Multiplying Rational Numbers in Fraction Form

We should always try to reduce before we start the questions so we keep our numbers small

Look for common factors in the numerators and denominators.
11 and 44 have a common factor 11.
7 and 21 have a common factor 7.
Divide numerator and denominator by their common factors.

Determine the product:

$\left(-\dfrac{11^1}{71} \right) \left(-\dfrac{21^3}{44_4} \right)$

$\dfrac{-11 \times (-21)}{7 \times 44}$

First, we simplify:

$= \left(-\dfrac{1}{1} \right) \left(-\dfrac{3}{4} \right)$

$= +\dfrac{3}{4}$

Then start multiplying

So, our new expression, looks like this:

$=$

$=$

$$\left(-4\tfrac{2}{7}\right)\left(-5\tfrac{2}{3}\right)$$

$$\left(-\frac{300}{7}\right)\left(-\frac{17}{31}\right)$$

$$\frac{170}{7}$$

$$24\tfrac{2}{7}$$

→ Improper ✓
fractions

→ reduce if possible

→ Multiply ✓

→ Switch back ✓
to mixed or reduce

$$\frac{16^{\div 8}}{32^{\div 8}} = \frac{2^{\div 2}}{4^{\div 2}} = \frac{1}{2}$$

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

$$\left(\frac{\cancel{5}^{1}}{\cancel{41}}\right)\left(\frac{\cancel{16}^{4}}{\cancel{25}5}\right)$$

$$\left(\frac{1}{1}\right)\left(\frac{4}{5}\right)$$

$$\left(\frac{4}{5}\right)$$

Multiplying Rational Numbers to Solve Problems

$$43 \times (-1.57)$$
$$-67.51$$

The price of a share in CIBC changed by -$1.57 on March 4th, 2008.
Linda owns 43 shares.
By how much did Linda's shares change on that day?

The change in value is represented by this expression:
-$1.57 x 43.

Use a calculator.

-$1.57 x 35 = - $67.51

The shares lost $67.51 that day.

Practice Questions
p. 128-129

Questions

~~**5ab**~~**, 9, 11, 12, 14,15,** ⎫ HW
16ab ⎬
Sheet *optional* ⎭

Do not just write down answers show work.
You don't have to rewrite word problems but
for 11, 12 write out the questions (NOT JUST
THE ANSWERS)