

Math 1303 - Math in the Liberal Arts

Quiz #13 - 2014.10.24

Solutions

1. Evaluate the following expression, be sure to show all your steps. Leave your answer as an improper fraction.

$$51 \times 4 \div 3 - (4 + 6 \times 8) - 6 \times 2 \wedge 4 \div 5 + 13 \times (2 \times 5 \wedge 2)$$

First we do parentheses (exponents first, then multiplication, then addition):

$$51 \times 4 \div 3 - (4 + 6 \times 8) - 6 \times 2 \wedge 4 \div 5 + 13 \times (2 \times 25)$$

$$51 \times 4 \div 3 - (4 + 48) - 6 \times 2 \wedge 4 \div 5 + 13 \times 50$$

$$51 \times 4 \div 3 - 52 - 6 \times 2 \wedge 4 \div 5 + 13 \times 50$$

Then exponents:

$$51 \times 4 \div 3 - 52 - 6 \times 16 \div 5 + 13 \times 50$$

Then multiplication:

$$104 \div 3 - 52 - 96 \div 5 + 650$$

Then division:

$$\frac{204}{3} - 52 - \frac{96}{5} + 650$$

We simplify this to

$$68 - 52 - \frac{96}{5} + 650$$

Now let us perform operations on the integer numbers:

$$666 - \frac{96}{5}$$

After common denominator, we write everything over that common denominator:

$$\frac{3330 - 96}{5}$$

Now we do subtraction in the numerator:

$$\frac{3234}{5}$$

This is as reduced as it can get.

2. Express your answer to problem 1 as a mixed number.

$$\frac{3234}{5} = 646\frac{4}{5}$$