

Warm Up:

Think of any questions you may have of any material that we have covered since Monday...

We have covered set notation, number properties, square roots, algebraic expressions and properties of exponents.

1-1: Set Notation

 $\{x | \text{---}\}$

This stuff was confusing and we blazed through it, just remember interval and set-builder.

Interval Notation: We use parentheses when we have which inequality signs?

 $< \quad >$

We use the blocks when we have which inequality signs?

 $\leq \quad \geq$

1-2: Properties

We had a ton of properties. You will be asked just one the quiz...it's easy, don't fret.

$$3 \quad -3 \quad \frac{1}{3}$$

We also learned to determine if things held true. Such as:

does $c + (-c) = d$ if $d = 6$. Is this sometimes, always or never true?

$$c + -c = 6$$

$$4 + -4 = 6$$

$$0 = 6$$

1-3 Square Roots

First thing is estimating square roots. Just use a calculator!

Then we simplified square roots. To do this just look for a perfect square and divide our root into a multiplication of 2 square roots.

Try these two:

$$\sqrt{18}$$

and

$$\sqrt{72}$$

$$\sqrt{9} \cdot \sqrt{2}$$

$$3\sqrt{2}$$

$$\sqrt{36} \cdot \sqrt{2}$$

$$6\sqrt{2}$$

We also looked at rationalizing a denominator. How do we do this?

Rationalize this fraction...

$$\frac{4}{\sqrt{5}} \cdot \frac{\sqrt{5}}{\sqrt{5}} = \frac{4\sqrt{5}}{\sqrt{25}} = \frac{4\sqrt{5}}{5}$$

Finally we can always add or subtract like radical terms. Such as $3\sqrt{2} + 5\sqrt{2}$

$$8\sqrt{2}$$

But sometimes they will give you numbers that can't be added...yet. Get the square roots the same and then add together.

Ex: $4\sqrt{3} - \sqrt{12}$

$$\begin{array}{l} \sqrt{4} \cdot \sqrt{3} \\ 4\sqrt{3} - 2\sqrt{3} \end{array}$$

1-4: Algebraic Expressions

Look for key words to write an expression.

Evaluating Expressions. Plug in the numbers and then simplify.

Ex: Simplify $3x + 2y^2 - xy$ for $x = 3$ and $y = 4$

$$\begin{aligned} 3 \cdot 3 + 2 \cdot 4^2 - 3 \cdot 4 \\ 9 + 32 - 12 \\ 29 \end{aligned}$$

Combining like terms. The letter AND exponent have to be exactly the same and then you can add or subtract them. You may have to use the distributive property before combining like terms.

1-5: Properties of Exponents

We had a ton of these. First.
Anything raised to the 0 power is
what?

Ex: $999^0 = 1$

When you have a negative exponent,
such as 5^{-3} , what do you do?

$$\frac{1}{5^3}$$

Product of powers, like $3^4 \times 3^{10}$, tells
us to do what with the exponents?

$$3^{14}$$

Quotient of powers, like $\frac{6^5}{6^2}$, do what?

$$6^3$$

$$6^2$$

Power of a power, $(2^3)^5$, we do what?

$$2^{15}$$

And finally, power of a product, $(3x)^4$,
what do we do?

$$3^4 x^4$$

Scientific Notation:
Break it into 2 problems. One with
numbers and the other with the
powers...

$$\frac{4.56 \times 10^7}{3.21 \times 10^2}$$
$$1.42 \times 10^5$$

Any questions over anything or any
problems you would like to try more
of before the quiz?