



TRANSPARENCY CHECK UPS



The Positive Engagement Project
THE POSITIVE ENGAGEMENT PROJECT
Making a difference...not a dollar.

Math Whiteboard Activities



TRANSPARENCY CHECK UPS

The classroom needs to be one in which students feel respected and safe to take risks; kids need to feel that their learning has a purpose and is relevant to their lives. One of the most important aspects of the classroom is continually checking for understanding; students need feedback on their progress in order to improve.

We live in the digital age, but that doesn't mean our schools have the funds or resources to be technologically on the cutting edge. Response clickers are incredible, but to be honest, I work at a Title I school where my students have little to no access to technology. With that said, we teachers are quite resourceful. We have tons of ways to check for understanding that don't require an ounce of electricity.

One of my favorite (and the kids as well) ways to check understanding is using whiteboards. Whiteboards are a great way of actively involving students in the learning process -- and a terrific tool for immediate feedback and assessment. Individual student whiteboards are the 21st-century version of the chalk slates used by students in colonial times (and I know they didn't have response clickers back then)! With that said, whiteboards do limit some of the

types of assessment you can do. That's where **Transparency Check Ups** come in.

The Positive Engagement Project created a series of whiteboard activities with our **Transparency Check Ups**. We still use the dry erase markers and erasers (or tissue), but the whiteboards are replaced with clear sheet protectors. In this packet you will find fun ways to check your students' understanding of concepts like time, money, place value, number lines, fractions, and more. All you have to do is print the Check Ups on cardstock and place them in a clear sheet protector, and you have yourself a whiteboard activity ready to go.

How do I set up Transparency Check Ups?

We suggest that you print the check ups you wish to use on a sturdy cardstock. When possible, print check ups back to back so you have two activities per clear protective sheet.

You can either keep your check up activities grouped together or held in student notebooks. We like to have them in notebooks at the students' desks so they can easily be pulled out to use at a moments notice. If you do decide to go the notebook route, build the student notebooks as you go; there is no need to have fifteen different

transparency protective sheets in there to start the year. Start with one or two and grow it as you move along.

Finally, make sure each student has a dry erase marker and some type of eraser.

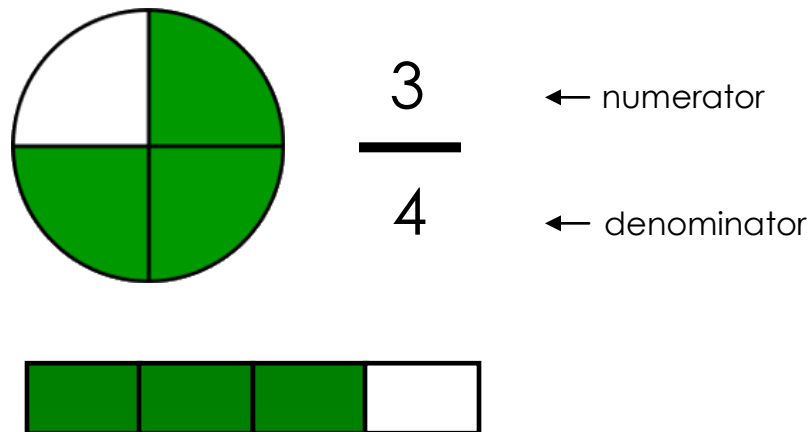
Here is a quick reference for the activities and some suggested ways to use the check ups, but surely you will add some of your professional creativity to many of our suggestions.

Clock: The clock activity is designed with both an analog clock (missing the hands) and a digital clock. It's perfect for teaching how to read a clock or elapsed time. Let the kids draw on the clear protective sheet both ways to show 11:30 (analog and digital) or give them a start time and have them show you what time it would be in 4 hours. Just wipe away answers and give them a different task.

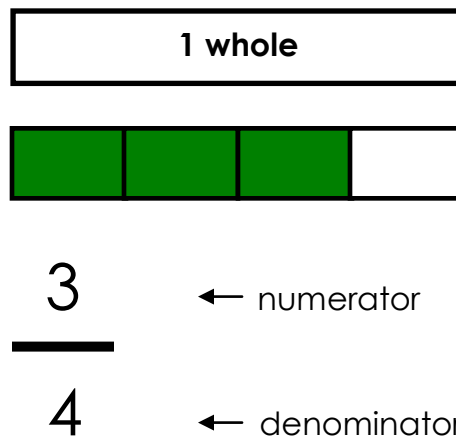
Coins: The coins activity is a fun way for kids to count money and make different coin combinations. You will notice we included fronts and back of quarters, dimes, nickels, and pennies. We even included the various fronts of the nickel. On the coin card we have

five boxes. The first four are next to the four different coins; this is where you can have your students write how much each coin is worth. The largest box on the bottom right hand corner is where you give the kids a total to look for. For example, have them write down .47 cents. They need to circle all of the coins needed to make that total. The great thing is that there is more than just one answer, so as soon as a student has figured it out, have them see if they can find a different way to find the same total!

Fractions #1: We have two separate fraction activities, the first one gives your students two ways to visually show a fraction. For example, if you give the students a numerator of 3 and a denominator of 4, it is their job to write the fraction out on the check up transparency and show $\frac{3}{4}$ two different ways. See below.



Fractions #2: The second activity for fractions involves the students creating a fraction in comparison to a whole. Like the first activity, give the students a numerator and a denominator and have them show you how that fraction relates to a whole unit. See below.



Graph: This activity is good for having students graph information, plot coordinate pairs, or create different types of graphs (histograms, bar graphs, line graphs, etc).

More – Less: If kids have a difficult time figuring out 1 more or 1 less, then having them calculate 10 more or 10 less is very intimidating. The More – Less activity is very simple to use; give students a number, let's use 47. Students write 47 in the center (the box with the star). Their objective is to find the 1 and 10 more (dotted boxes) and 1 and 10 less (gray boxes).

Multiplication Chart: Any practice for multiplication is always welcomed in my classroom. You can use this simple chart and have the kids circle all the different ways to make 48 or just call out a problem and have them circle the answer. With multiplication, any practice is good practice.

Number Line: On the number line check up, we have included three different number lines. The top number line is equipped with ten places to mark numbers. The middle number line only has seven, while the bottom number line is reduced down to two.

The number line is an excellent tool for developing numerical understanding and making connections across number systems. Through the use of number lines, students can visually represent the relationships among whole numbers, integers, rational numbers, and irrational numbers. This representation gives each number a unique point on the line and a distance from zero depicting its magnitude and direction. Students use number lines to display operations, equivalents, and solutions.

The uses of the number line check up are countless. They may range from students constructing number lines, paying special attention to the concept of equal intervals to locating and labeling fractions and

decimals on number lines to visualize the concept that there are numbers between whole numbers to finding the midpoint between two places on the bottom number line.

Place Value #1: This first place value chart is intended for primary grades. You can call out numbers and have the students fill in the ones, tens, and hundreds place. Besides just writing the number, you can say things like, "I'm thinking of a number with a 3 in the tens place....a 7 in the ones place....and a 2 in the hundreds place. What's my number?"

Place Value #2: The second place value chart adds thousands into the mix. Just like #1, you can call out numbers or have the students place digits according to your clues.

Place Value #3: The final place value chart focuses on place value to both whole numbers and parts of a whole (tenths, hundredths, and thousandths).

Protractor: The large protractor could be used for drawing angles. The teacher can call out an angle, such as 145° , and the students can draw it out on their protractor check up. You could also have

them draw an acute angle and show you. What an easy and quick way to see if students are understanding angles!

Quadrants – Coordinates: The coordinate plane is divided into four quadrants. One simple activity could be to have the students mark each of the four quadrants. You could also ask students to mark a point in quadrant III?. Maybe have them show you $(-5, 3)$. The possibilities are endless with the quadrants – coordinates check up.

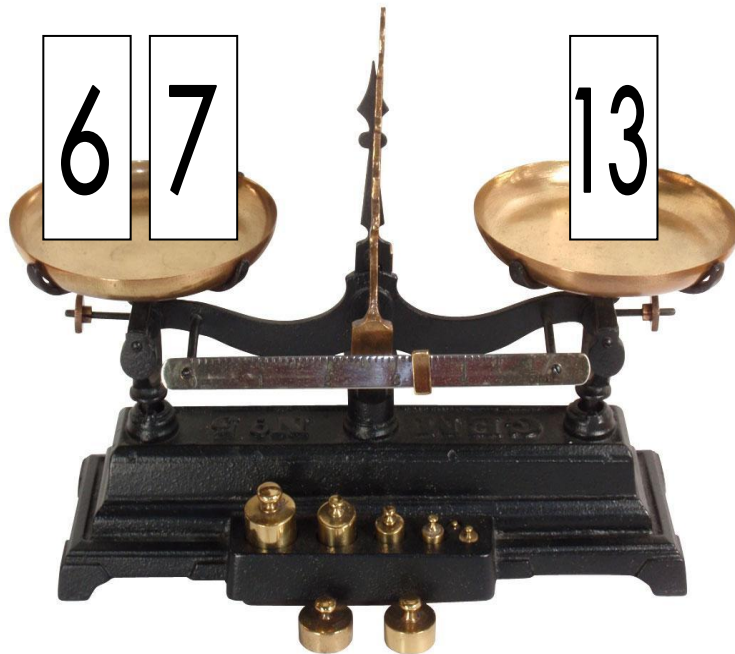
Rounding: The image on the rounding check up matches the image we use on our Concept Learning Bricks (available for free at www.PEPnonprofit.org). Give students some numbers to round, for example 87. Students would write the number in the top boxes in the correct place value. If students are rounding to the nearest 10, they have to look at the 7. According to the hill, 7 tells you to go up higher. What about 83? According to the hill, 3 tells you to go back down. Students will write the rounded number in the boxes just below the first set.

Rulers: The rulers on this check up represent both inches and centimeters to their actual sizes. You could have students measure various objects with the rulers and then mark the ruler and/or write the length on the white space. We especially like this check up



because you don't have to worry about your students slapping each other with real rulers or peeling back the metal edging!

Scale: The scale is a cool check up because you can use it to balance a variety of things. Look at this example. You can give the students the 13 and they have to come up with two numbers that would balance the scale. Again, since there are multiple ways to do this, kids can continue to challenge themselves to find them all.

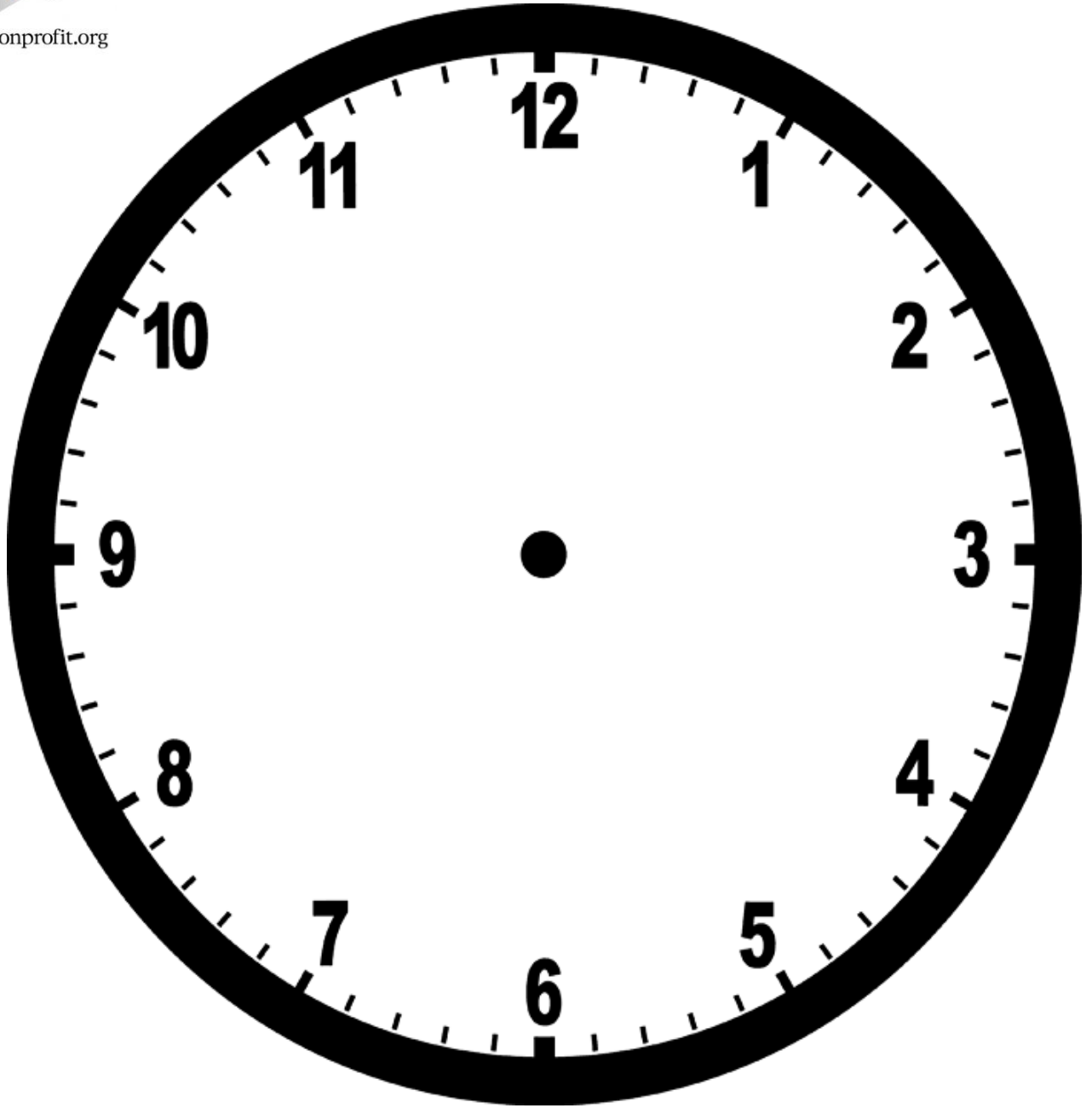


You could also do this with fractions, decimals, or any other mathematical concept that could be balanced.

Well, that's it. Print the check ups you like (on cardstock), put them in clear protective sheets, pass out some dry erase markers, and let the fun begin!

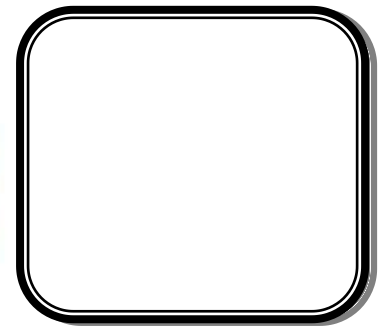
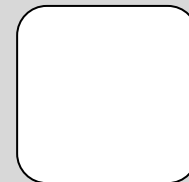
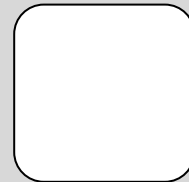
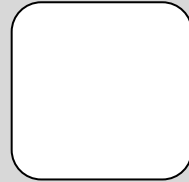
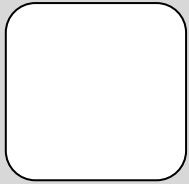


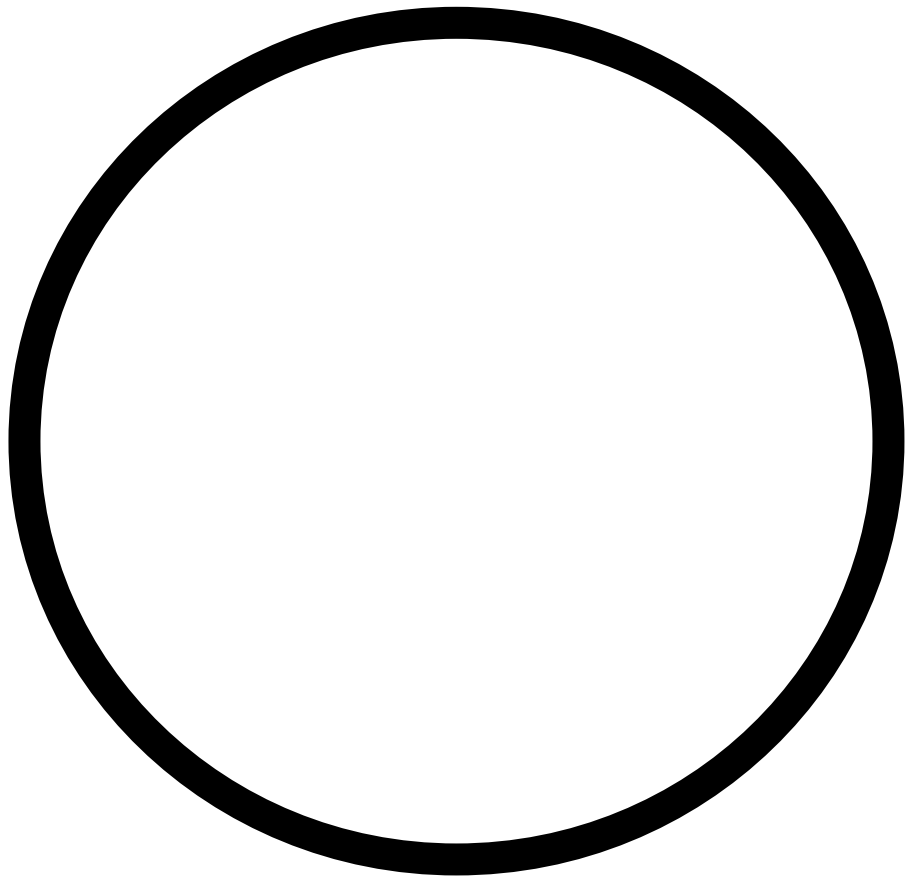
www.PEPnonprofit.org



Four rounded rectangular boxes arranged horizontally, separated by a colon. The first two boxes are on the left of the colon, and the last two are on the right. This is a template for writing a time in the format HH:MM.

Clock





← numerator

← denominator

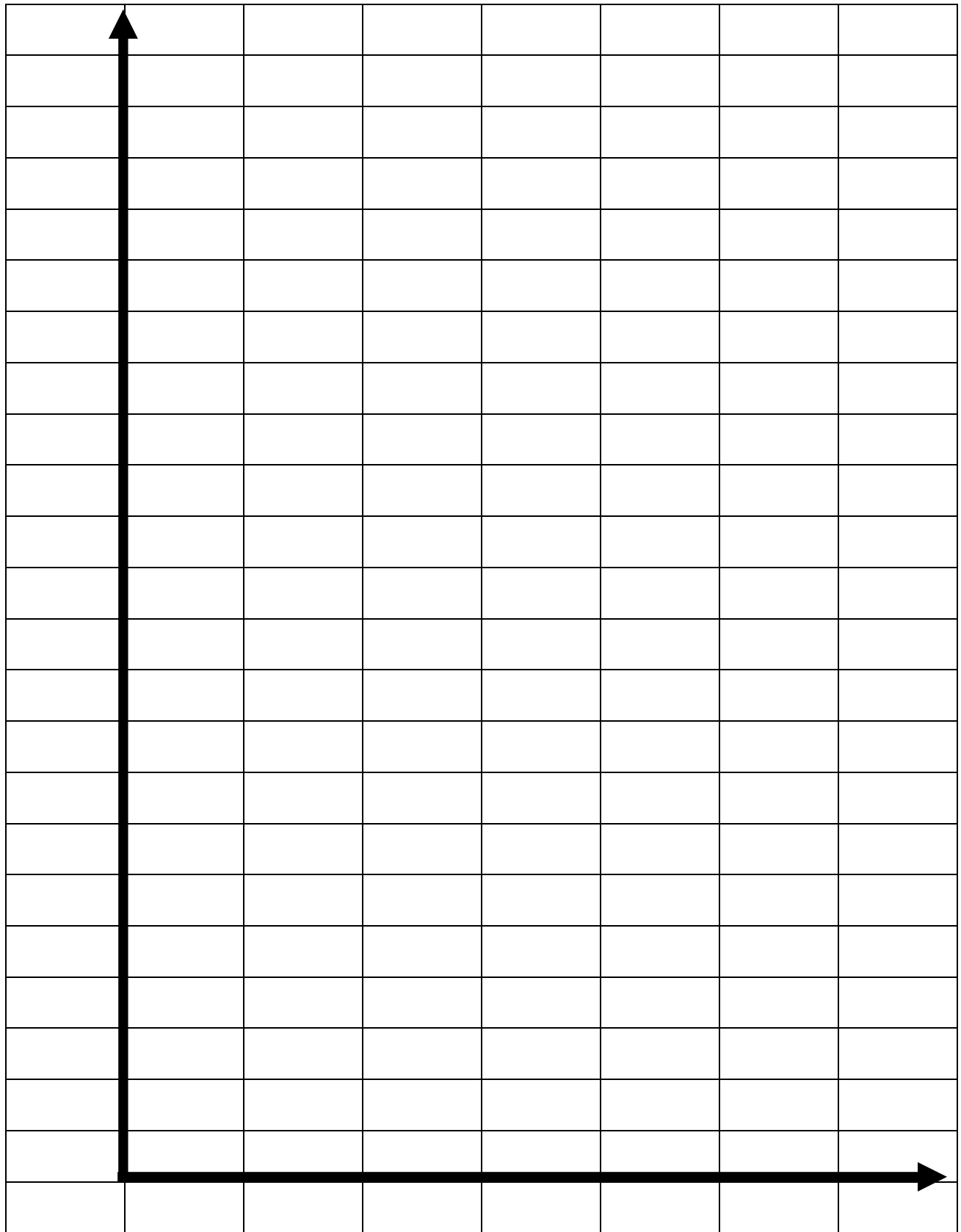


1 whole

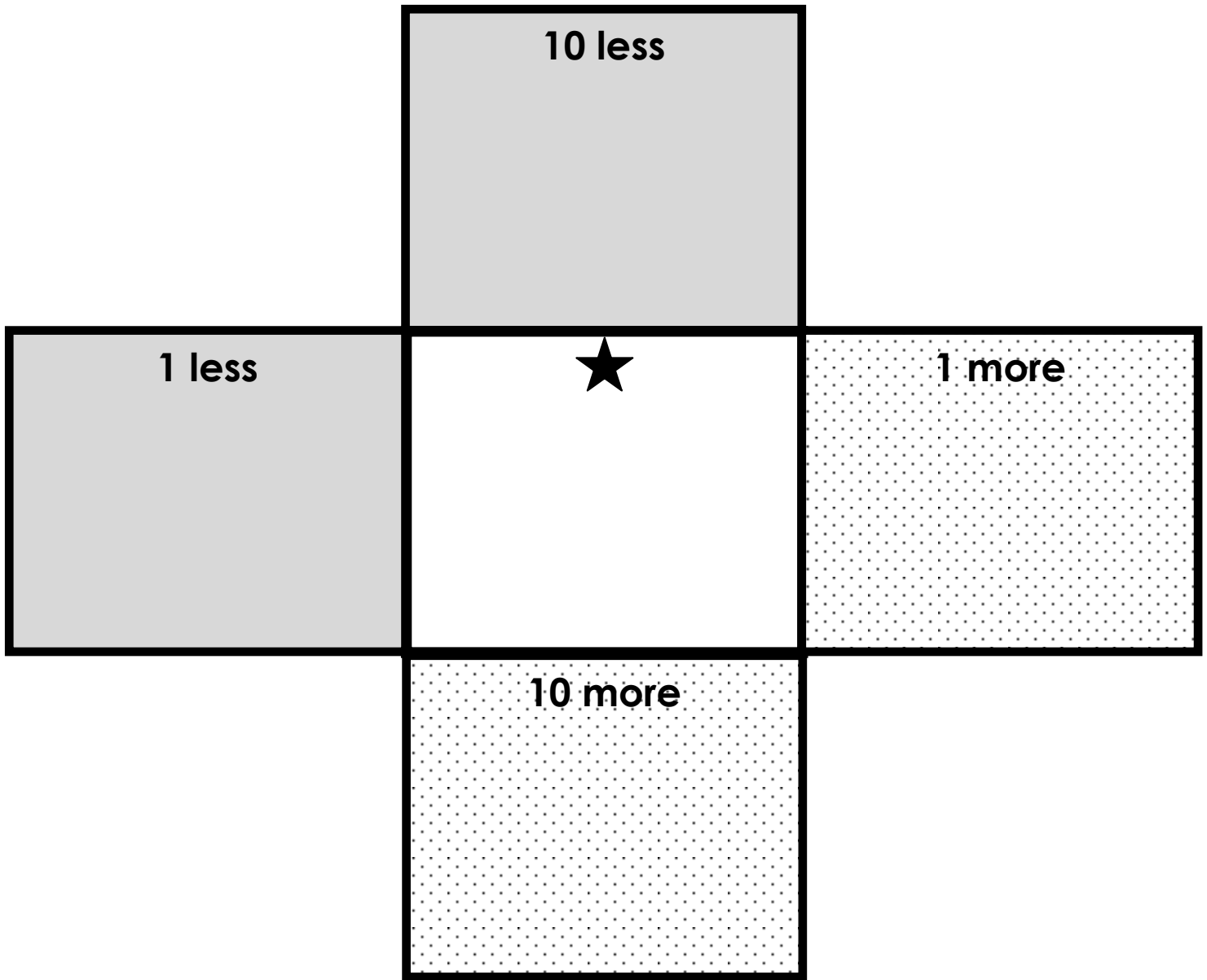
← numerator



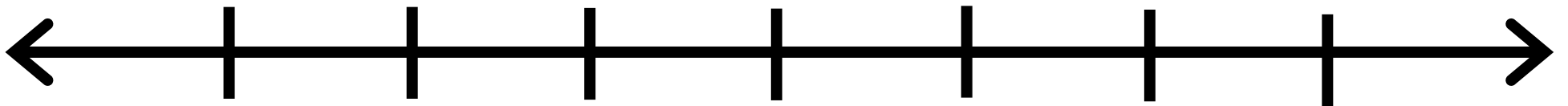
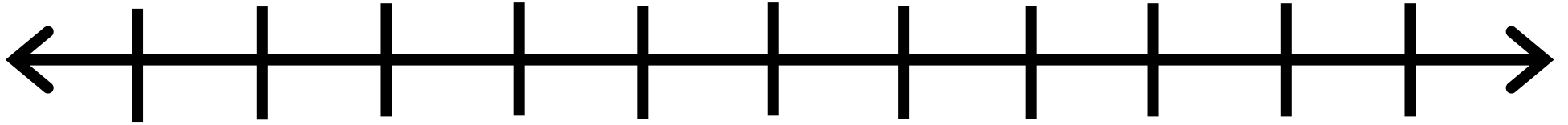
← denominator



Graph



X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144



Number Line

Hundreds	Tens	Ones

Thousands		
Hundreds	Tens	Ones

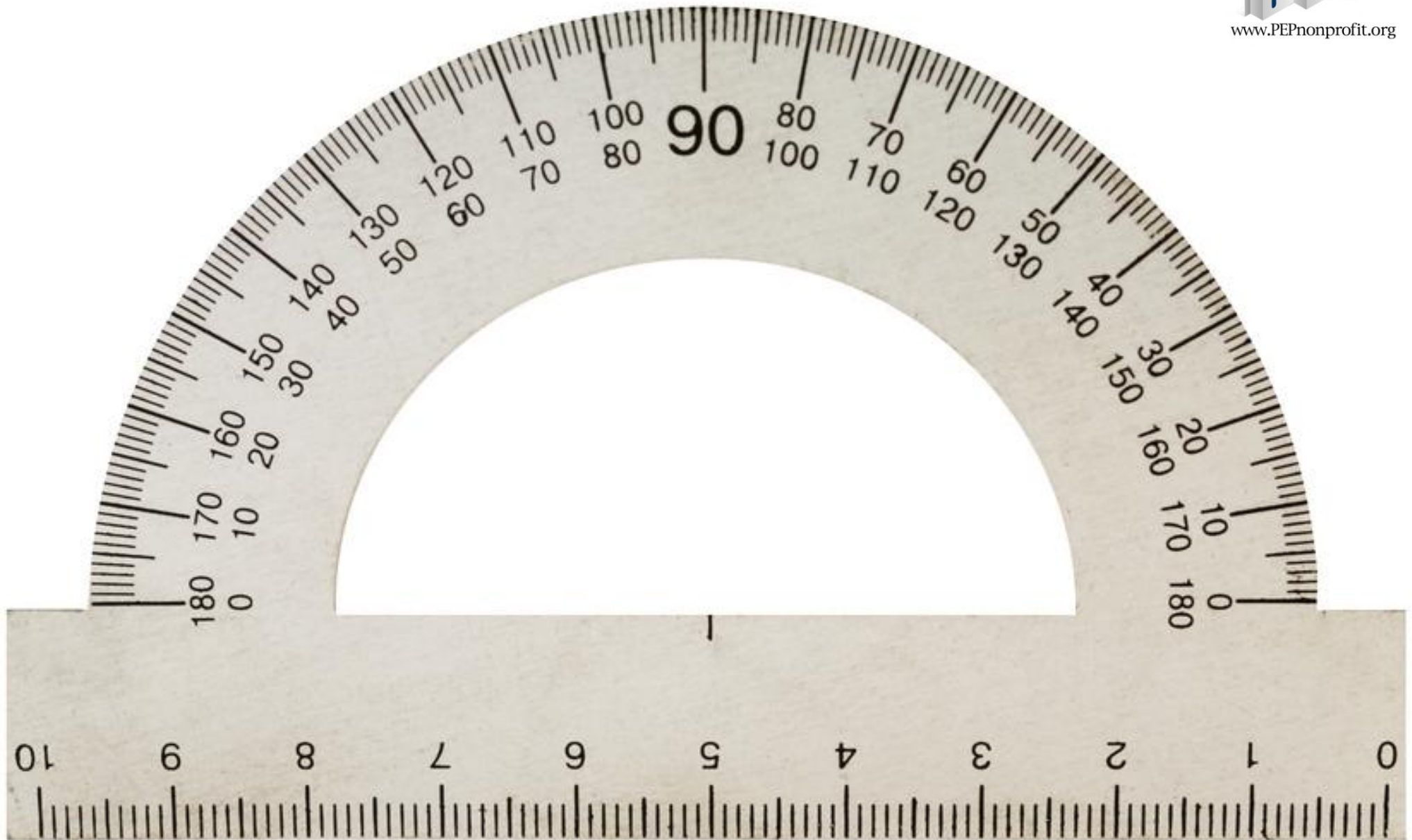
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Hundreds	Tens	Ones

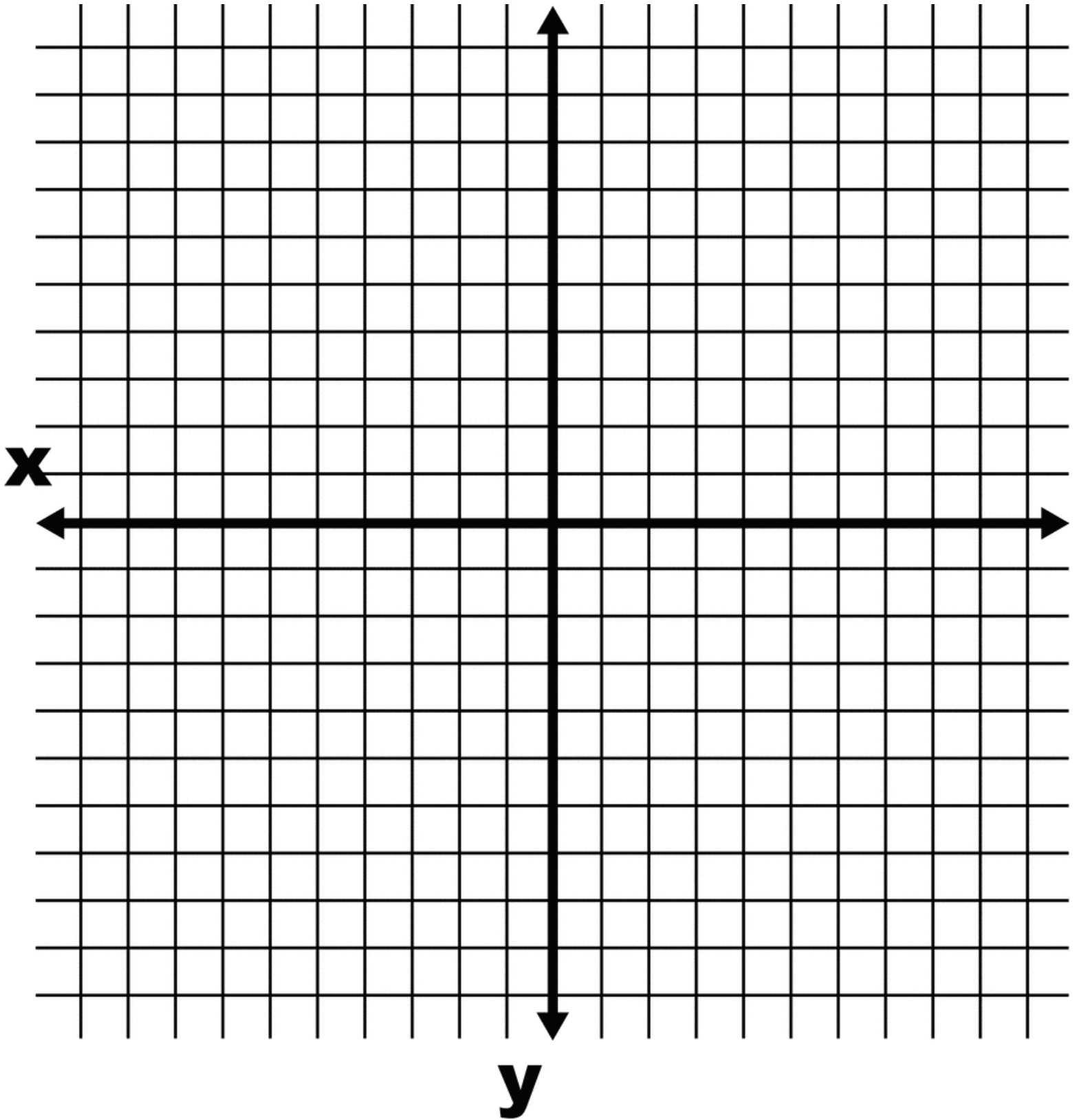
Hundreds	Tens	Ones



Tenths	Hundredths	Thousandths



Protractor – Angles



Quadrants – Coordinates

Hundreds	Tens	Ones



0 1 2 3 4

5 6 7 8 9

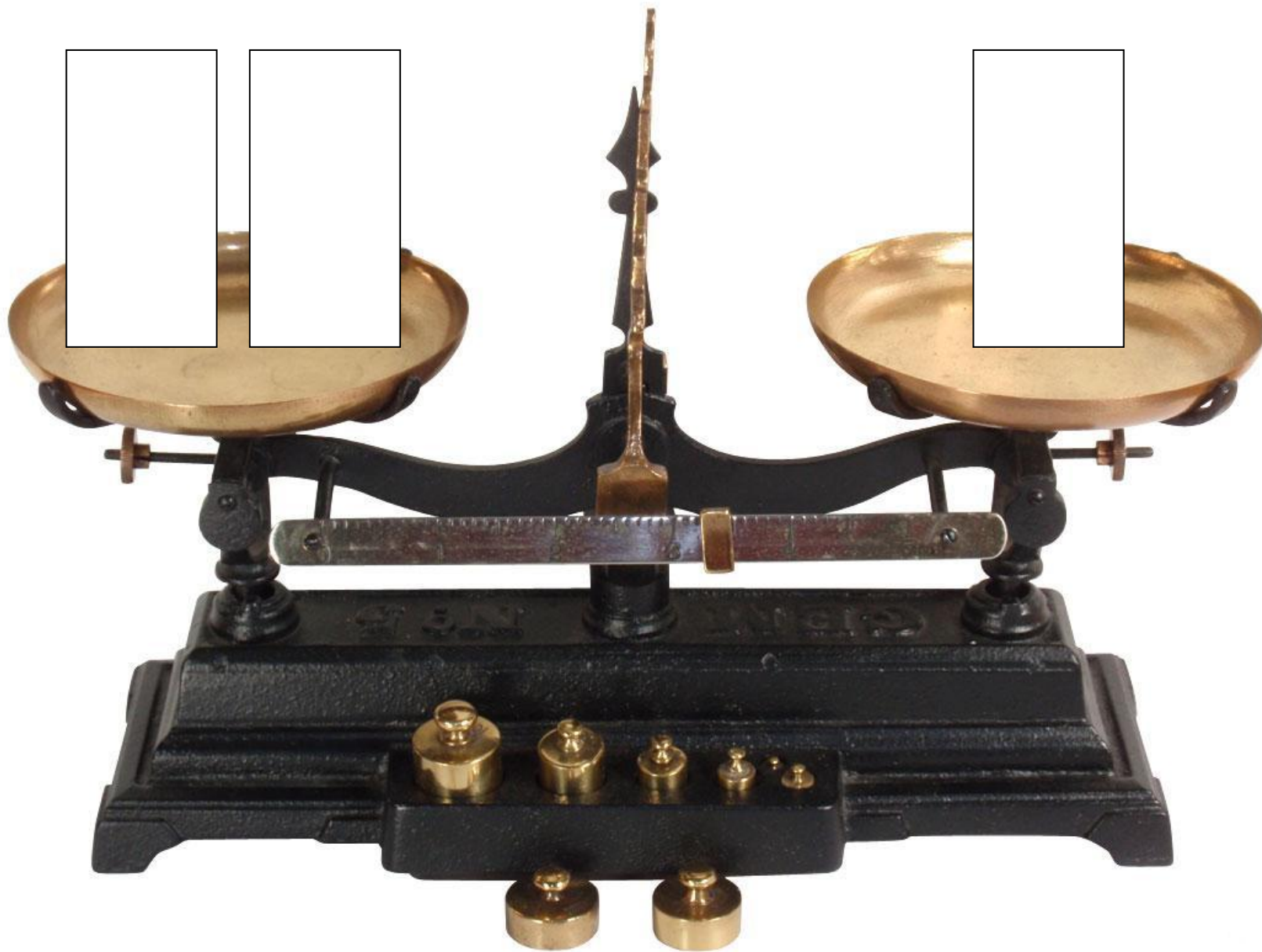
Rounding

inches



centimeters





Scale