

Enrichment Packet #24

Due: Monday

NAME: _____

Splish Splash

Susie dives from the high board. The high board is 3 yards above the water. **Reasoning**

1. What is the height of the high board in ft?

2. If Susie is 4 ft 8 in. tall, and she stands on the diving board, how many inches are there from the top of Susie's head to the water?

3. If Susie jumps off the board feet first, how many inches above the water are her feet when the top of her head is level with the board?

4. When Susie jumps into the water the splash is $\frac{1}{6}$ of the height of the board. How high is the splash in inches?

5. Susie's mother is watching her and is standing 2 ft from the pool. When Susie jumps in, the splash goes outside the pool 21 in. Will Susie's mom get wet? Explain.

My Aunt's New Doll

Reasoning

Sarah is having a very special porcelain doll made for her favorite aunt. The doll is going to be 1 m tall, and Sarah wants it to look as realistically like her Aunt Jane as possible. Sarah's aunt is 2 m tall.

1. About how many centimeters long should the legs be? Explain how you decided.

2. The doll's head is 18 cm long. The choices for the eyes are 1 mm, 2 cm, and 5 cm in diameter. Which eye choice should Sarah pick for the doll?

3. Sarah's aunt has long, wavy, brown hair that reaches halfway down her back. It is about 50 cm long. About how long should the doll's hair be?

4. After the doll was completed, Sarah received an itemized bill. The price of the doll's hat was based on a hat that measured 50 cm in diameter. Do you think this item has been listed correctly? Explain.

5. Sarah gave the doll to Aunt Jane on her birthday. Sarah knows that Aunt Jane was born 3 years after Sarah's mother, and that Sarah's mother is 24 years older than Sarah is. Sarah is 9 years old. How old is Aunt Jane?

Clever Scientists

Reasoning

Jane and Jim are in Mr. Marten's science class. They have been chosen to make the fruit smoothie that will be served at the student council breakfast. They need to make 3 L of the drink but the only measuring devices left in the science lab are the following.

5 mL beaker 20 mL beaker 500 mL beaker

Explain how they can use the three beakers to measure out the following ingredients.

1. One half of a liter of raspberry juice

2. 750 mL of blueberry juice

3. 1 L of sparkling water

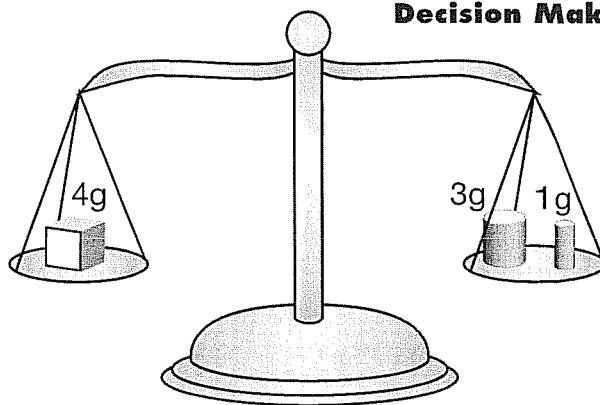
4. 460 mL of apple juice

5. The remainder of the 3 L is crushed ice.

Balance the Pans

Use gram measures—1 g, 3 g, and 9 g—to balance each pan. The left column in the chart shows the mass of the object that is on the left pan to start with. Fill in the middle and right columns with the mass you would add to both sides to balance the pans. The first one has been done for you.

Decision Making



	Mass of Object on Left Pan	Mass Added to Left Pan	Mass Added to Right Pan
1.	1 g	0	1 g
2.	3 g		
3.	5 g		
4.	8 g		
5.	9 g		
6.	10 g		
7.	12 g		
8.	15 g		

Enrichment 16-7

Changing Metric Units

For 1 through 12, compare. Write $>$, $<$, or $=$ for each \bigcirc .

1. 4 m \bigcirc 400 dm 2. 4 dm \bigcirc 40 cm

3. 10 L \bigcirc 1,000 mL 4. 2 kg \bigcirc 1,500 g

5. 15 cm \bigcirc 150 mm 6. 1 km \bigcirc 999 m

7. 4 L \bigcirc 4,500 mL 8. 500 g \bigcirc 5 kg

9. 6 km \bigcirc 6,000 m 10. 200 cm \bigcirc 3 m

11. 3,000 m \bigcirc 2 km 12. 100 mm \bigcirc 1 dm

13. Which measurement is **NOT** equal to 3 m?

A 30 dm

B 300 cm

C 3,000 mm

D 3,000 cm

14. **Writing to Explain** If 5 potatoes together weigh a kilogram and 8 pears together weigh 1,200 grams, which weighs more, a potato or a pear? Explain.

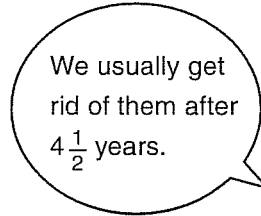
Time to Talk

Match the statement on the left to the correct response on the right.

Decision Making



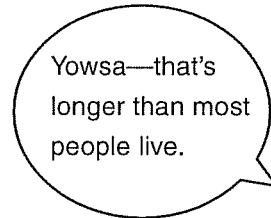
We've gone 72 hours without electricity.



We usually get rid of them after $4\frac{1}{2}$ years.



I've owned the car for 54 months.



Yowsa—that's longer than most people live.



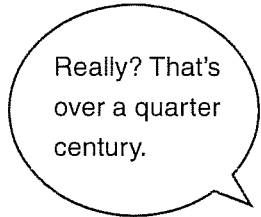
They said we might have to wait eight weeks for delivery.



Wow. Three days is a long time for that!



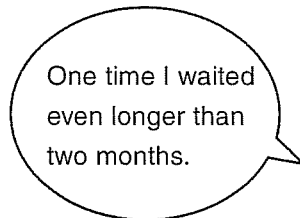
Her family has owned the land for over a century.



Really? That's over a quarter century.



I've had season tickets for three decades now.



One time I waited even longer than two months.

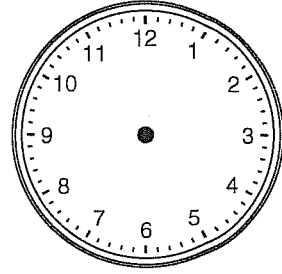
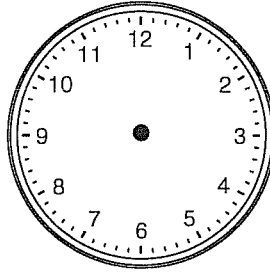


It's About Time

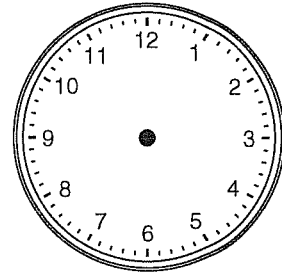
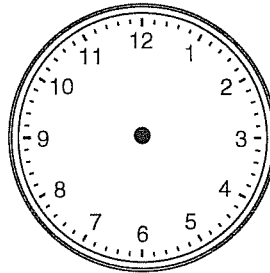
Study each situation. Draw the hands on both clocks to show your estimate of how long each activity would take. Write A.M. or P.M. under each clock.

Estimation

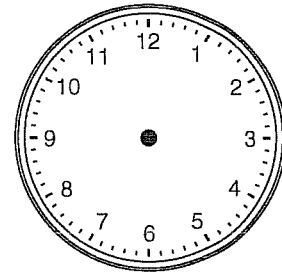
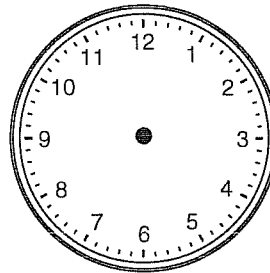
1.



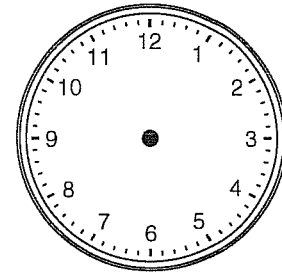
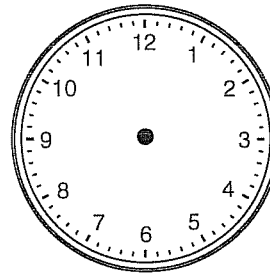
2.



3.



4.



Enrichment 16-10

Summer in the City

The chart below shows average temperatures in various cities in February and July.

City	February	July	Temperature Change
Boston	20°F	88°F	
Seattle	45°F	75°F	
Pittsburgh	15°F	92°F	
St. Louis	36°F	84°F	

1. Fill in the temperature change column in the chart above.
2. Which city has the biggest temperature change between February and July?

3. Which city has the smallest temperature change between February and July?

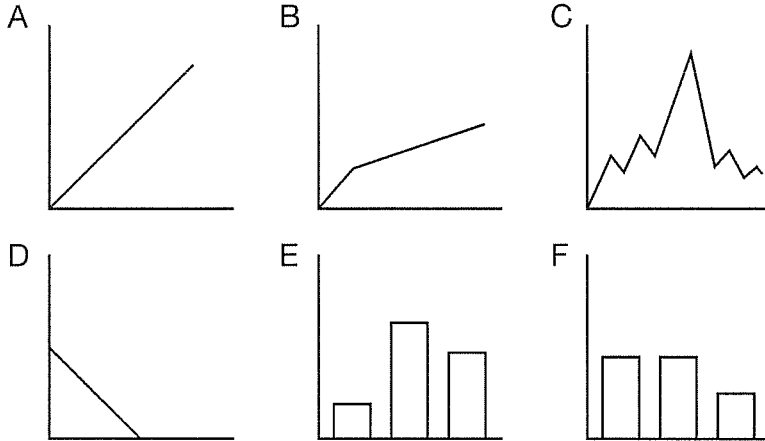
4. How many cities on the chart might expect to have snow in February?

5. Which city's temperature in February is 3 times the temperature of another city?

Match that Graph

The graphs below have no labels on them. Match the graphs based upon the type of information that each contains with the letter of the correct graph in the space that is provided.

Data



- _____ 1. The biking club noticed that the rate of speed went down by 2 miles an hour for every mile they biked.
- _____ 2. Santi's plant experiment showed a steady growth of 2 centimeters a week.
- _____ 3. Jason's income from his dog-walking service rose quickly as he gained new customers, and then rose more slowly.
- _____ 4. Most students plan to do their homework right after school, some right after dinner, and almost none in the morning.
- _____ 5. Janet spends an equal time reading and playing sports but less time watching television.
- _____ 6. The value of Mark's stock rose sharply at first and then fell and rose several times.