NAME   DATE   PERIOD
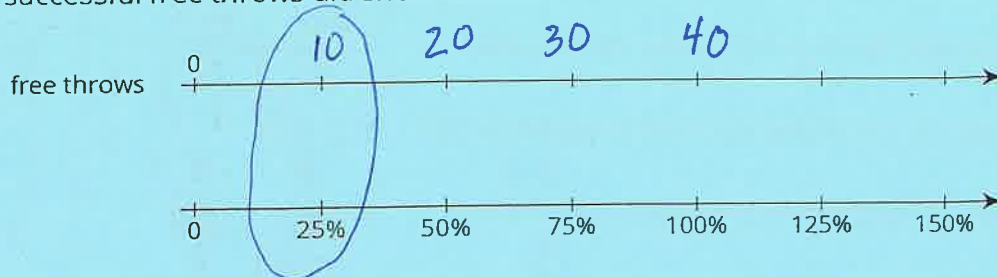
Unit 3, Lesson 11: Percentages and Double Number Lines

1. Solve each problem. If you get stuck, consider using the double number lines.

   a. During a basketball practice, Mai attempted 40 free throws and was successful on 25% of them. How many successful free throws did she make?

   free throws: 0, **10**, **20**, **30**, **40**

   0, **25%**, 50%, 75%, 100%, 125%, 150%

   b. Yesterday, Priya successfully made 12 free throws. Today, she made 150% as many. How many successful free throws did Priya make today? **12**

   free throws: 0, **3**, **6**, **9**, **12**, **15**, **18**

   0, 25%, 50%, 75%, 100%, 125%, **150%**

2. A 16-ounce bottle of orange juice says it contains 200 milligrams of vitamin C, which is 250% of the daily recommended allowance of vitamin C for adults. What is 100% of the daily recommended allowance of vitamin C for adults?

   vitamin C (mg): 0, **40**, **80**, **120**, **160**, **200**

   0, 50%, **100%**, 150%, 200%, 250%

3. At a school, 40% of the sixth-grade students said that hip-hop is their favorite kind of music. If 100 sixth-grade students prefer hip hop music, how many sixth-grade students are at the school? Explain or show your reasoning.

   0, **100**

   0, **20%**, **40%**, **60%**, **80%**, **100%**

4. Diego has a skateboard, scooter, bike, and go-cart. He wants to know which vehicle is the fastest. A friend records how far Diego travels on each vehicle in 5 seconds. For each vehicle, Diego travels as fast as he can along a straight, level path. *Next page* **Challenge**
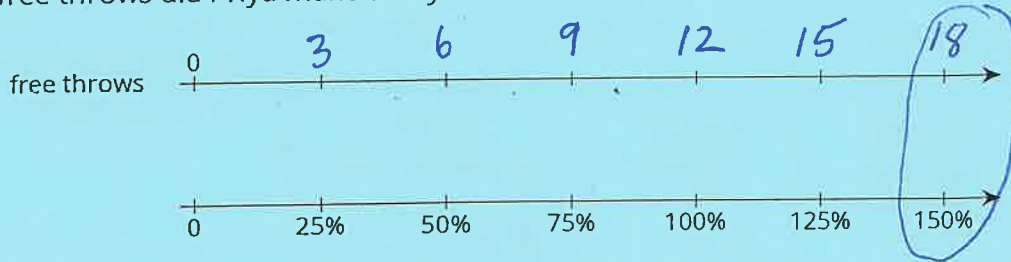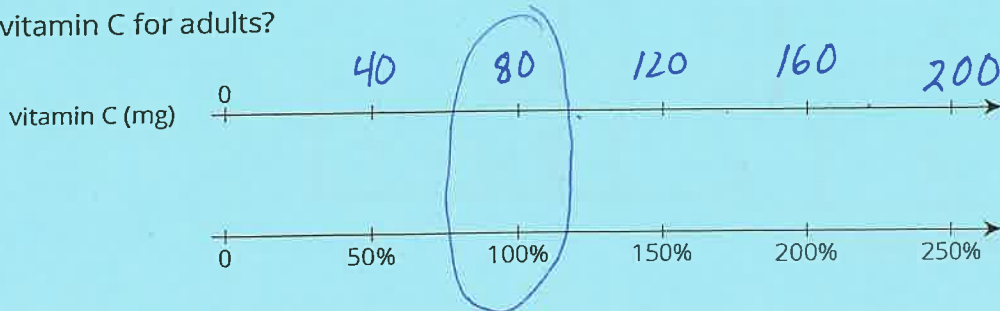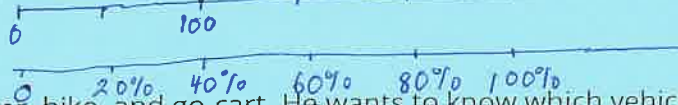
NAME _____ DATE _____ PERIOD _____

vehicle	distance traveled	CM
skateboard	90 feet ×/2 = 1080 in	2743.2
scooter	1,020 inches	2590.8
bike	4,800 centimeters already	4800
go-cart	0.03 kilometers ×1000 × 1000 m	3000

30 × 100 cm = 3000

a. 100 inches equal 254 centimeters. What is the distance each vehicle traveled in centimeters? 1 inch = 2.54 cm
see table

b. Rank the vehicles in order from fastest to slowest.
bike
↓
go cart
↓
skateboard
↓
scooter

/2

(from Unit 3, Lesson 9)

5. It takes 10 pounds of potatoes to make 15 pounds of mashed potatoes. At this rate:

a. How many pounds of mashed potatoes can they make with 15 pounds of potatoes?

b. How many pounds of potatoes are needed to make 50 pounds of mashed potatoes?

(from Unit 3, Lesson 7)

22.5 pounds mashed

Pot	Mashed
10	×3 15
15	22.5
3⅓	5
33⅓	50

×1.5   ×1.5   33⅓   /2

×1.5   ÷3   ×10

or potatoes × $\frac{3}{2}$ → mashed

or mashed × $\frac{2}{3}$ → potatoes

/8

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