Monday HW Corrected

NAME _____ DATE _____ PERIOD _____

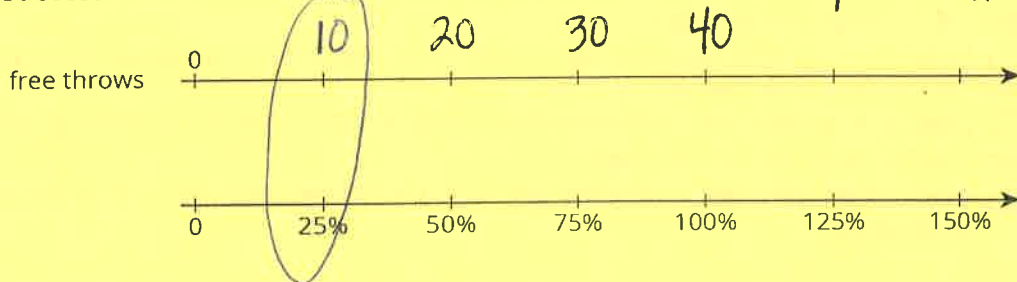# Unit 3, Lesson 11: Percentages and Double Number Lines

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?   10 made baskets
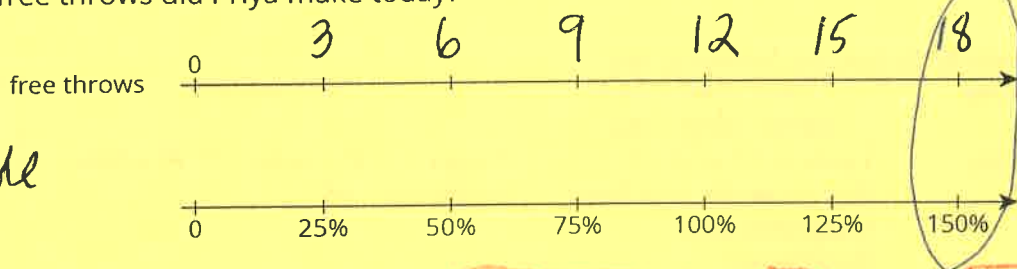
   10 20 30 40

   free throws

   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?

   3 6 9 12 15 18
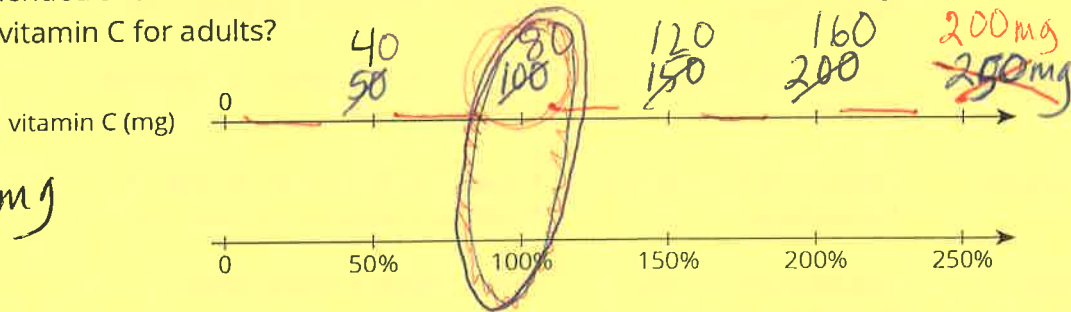
   free throws

   18 made

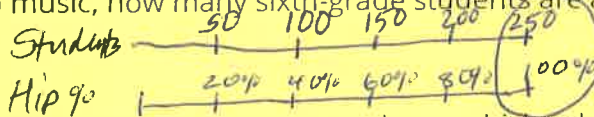   0 25% 50% 75% 100% 125% 150%

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?

   80
   100 mg

   40 80 120 160 200mg
   50 100 150 200 250mg

   vitamin C (mg)

   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.

   Students 50 100 150 200 250
   Hip % 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

$\div 10 \Big(\dfrac{100\ in}{1}$ $254\ cm \Big) \div 10$ $2.54\ cm$

vehicle	distance traveled
skateboard	90 feet
scooter	1,020 inches
bike	4,800 centimeters
go-cart	0.03 kilometers

3rd fastest — skateboard
4th fastest — scooter
fastest — bike
2nd fast — go-cart

a. 100 inches equal 254 centimeters. What is the distance each vehicle traveled in centimeters?

90 feet × 12 inches = 1080 inches × 2.54 = 2743.2 cm

1,020 inches × 2.54 = 2590.8 cm

b. Rank the vehicles in order from fastest to slowest.

0.03 kilometers → 3003 cm

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(from Unit 3, Lesson 9)

$\div 33.3 \Big(\dfrac{1\ km}{.03}$ $1000\ m \Big)$ 30.03m × 100cm = 3003 cm.

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)

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Pot | **Mashed**

$\div 15 \begin{bmatrix} \div 10 \Big(\begin{matrix} 10 \\ 1 \end{matrix} & \begin{matrix} 15 \\ 1.5 \end{matrix} \Big) \div 10 \\ \times 15 \Big(\begin{matrix} 15 \\ \end{matrix} & \boxed{22.5} \Big) \times 15 \\ \times 50 \Big(\begin{matrix} .66 \\ 33.\overline{3} \end{matrix} & \begin{matrix} 1 \\ 50 \end{matrix} \Big) \times 50 \end{bmatrix} \div 15$

OR divide and multiply

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a. $\dfrac{15\ mashed}{10\ pot} = \dfrac{1.5\ mash}{1\ pot} \times 15 = 22.5\ mashed$

b. $\dfrac{10\ pot}{15\ mashed} = \dfrac{.66\ pot}{1\ mash} \times 50 = 33.3\ potatoes$ /2