

Question 4

Not complete
Marked out of 8

Calculate the flow rate in drops per min, rounding the rate to the whole number

- a. An infusion of 2000 mL has been ordered to run 16 hr. The set calibration is 10 drops per mL.

- b. The order is for 500 mL in 8 hr. The set is calibrated at 15 drops per mL.

- c. Administer 150 mL in 3 hr. A microdrip is used.

- d. An IV medication of 30 mL is to be administered in 30 min using a 15 drops per mL.

$$A. \frac{\text{drop}}{\text{min}} = \frac{10 \text{ drop}}{1 \text{ mL}} \times \frac{2000 \text{ mL}}{16 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} = \frac{20000}{960} = 20.83 = 21 \text{ drop/min}$$

$$B. \frac{\text{drop}}{\text{min}} = \frac{15 \text{ drop}}{1 \text{ mL}} \times \frac{500 \text{ mL}}{8 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} = \frac{7500}{480} = 15.62 = 16 \text{ drop/min}$$

$$C. \frac{\text{mL}}{\text{hr}} = \frac{60 \text{ drop}}{1 \text{ mL}} \times \frac{150 \text{ mL}}{3 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} = \frac{9000}{180} = 50 \text{ drops per min}$$

$$d. \frac{\text{drop}}{\text{min}} = \frac{15 \text{ drop}}{1 \text{ mL}} \times \frac{30 \text{ mL}}{30 \text{ min}} = \frac{450}{30} = 15 \text{ drops per min}$$

Question 5

Ordered: 500 mL D5W at 25 mL per h.

Equipment: pediatric microdrip administration set for gravity infusion with a microdrip administration set.

What type of flow rate will you be looking for?

What is the flow rate?

1. drops per min

$$2. \frac{\text{drop}}{\text{min}} = \frac{60 \text{ drops}}{1 \text{ mL}} \times \frac{25 \text{ mL}}{1 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} = \frac{1500}{60} = 25 \text{ drops per min}$$

Question 6

Ordered: 250 mL 0.45 NS at 30 mL per h.

Equipment: gravity infusion with a macrodrop tubing, DF 15.

What type of flow rate will you be looking for?

What is the flow rate?

$$2. \frac{\text{drops}}{\text{min}} = \frac{15 \text{ drops}}{1 \text{ mL}} \times \frac{30 \text{ mL}}{1 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} = \frac{450}{60} = 8 \text{ drops per min}$$

Question 7

Ordered: 30 mL antibiotic IVPB q4h infused over 20 mins.

Equipment: gravity device, DF 15

What type of flow rate will you be looking for?

What is the flow rate?

$$2. \frac{\text{drop}}{\text{min}} = \frac{15 \text{ drops}}{1 \text{ mL}} \times \frac{30 \text{ mL}}{20 \text{ min}} = \frac{450}{20} = 23 \text{ drops per min}$$

Question 8

Ordered: IV 0.45% NaCl sol at 110 mL per h. DF 10.

What type of flow rate will you be looking for?

What is the flow rate?

$$\frac{\text{drop}}{\text{min}} = \frac{10 \text{ drop}}{1 \text{ mL}} \times \frac{110 \text{ mL}}{\text{hr}} \times \frac{1 \text{ hr}}{60 \text{ min}} = \frac{1100}{60} = 18.3 = 18 \text{ drops/min}$$

Ordered: 50 mL anti-cancer drug (IVPB) over 20 minutes.

What type of flow rate will you be looking for?

What is the flow rate?

$$\frac{\text{mL}}{\text{hour}} = \frac{50 \text{ mL}}{20 \text{ min}} \times \frac{60 \text{ min}}{1 \text{ hr}} = \frac{3000}{20} = 150 \text{ mL per hr}$$

Question 10

Ordered: 60 mL antibiotic (IVPB) over 30 minutes.

What type of flow rate will you be looking for?

What is the flow rate?

$$\frac{\text{mL}}{\text{hour}} = \frac{60 \text{ mL}}{30 \text{ min}} \times \frac{60 \text{ min}}{\text{hr}} = \frac{3600}{30} = 120 \text{ mL per hr}$$

Question 11

Ordered: 250 mL D5W over 4 hours.

Electronic infusion pump.

What type of flow rate will you be looking for?

What is the flow rate?

$$\frac{\text{mL}}{\text{hr}} = \frac{250 \text{ mL}}{4 \text{ hr}} = 63 \text{ mL per hr}$$