

***Practical Nursing Calculations - Getting the dose
right 1st edition Mayner Test Bank***

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MODULE ONE: BASIC SKILLS

ASSESSMENT TWO: Basic Mathematics

Write down the correct answer for each of the following computations. Try to complete this assessment in 30 minutes. Avoid using a calculator unless this is permitted at your place of learning; however, feel free to check your answers with a calculator on completion of the quiz.

1 $200 + 57 + 86 =$

- a 296
- b 310
- c 327
- d 343

2 $935 \times 9 =$

- a 8016
- b 8415
- c 8632
- d 8715

3 $9428 - 6374 =$

- a 2962
- b 3007
- c 3054
- d 3154

4 $547 \times 27 =$

- a 14387
- b 14529
- c 14769
- d 14865

5 $7493 \div 100 =$

a 7.493

b 74.93

c 749.3

d 0.7493

6 $27 + 32.11 + 56.1 =$

a 106.01

b 115.21

c 117.31

d 119.21

7 $246 - 82.06 =$

a 161.94

b 161.6

c 163.06

d 163.94

8 $728 \times 1000 =$

a 0.782

b 728 000

c 72.8

d 7280

9 The lowest form for the fraction $12/32$ would be

a $4/11$

b $3/8$

c $6/18$

d $6/16$

- 10 When simplified to its lowest form, the multiplication $500/4 \times 15/60$ would be
- a 31.25
 - b 27.5
 - c 29.25
 - d 12.5
- 11 When converted to a decimal, the fraction $7/10$ would be
- a 70
 - b 0.7
 - c 7.0
 - d 0.07
- 12 When converted to a percentage, the decimal 0.75 would be
- a 0.75%
 - b 7.5%
 - c 75%
 - d 750%
- 13 132 pounds, when converted to kg (2.2 pounds per kg) would be
- a 35 kg
 - b 55 kg
 - c 58 kg
 - d 60 kg
- 14 If your salary was \$13.70 per hour, in 8 hours you would earn
- a \$109.60
 - b \$112.40
 - c \$106.80
 - d \$110.70

- 15 If your train fare is \$3.80 per day, for 5 days it would cost you
- a \$17.60
 - b \$18.40
 - c \$19
 - d \$20.20
- 16 If 1 inch equals 2.54 cm, 57 inches is equal to
- a 142.36 cm
 - b 144.78 cm
 - c 145.12 cm
 - d 148.44 cm
- 17 John's height is 177.8 cm. This is equal to
- a 68 inches
 - b 69 inches
 - c 70 inches
 - d 72 inches
- 18 John is 10 stone. 1 stone is equal to 14 pounds, so John's weight in pounds is:
- a 140 pounds
 - b 142 pounds
 - c 144 pounds
 - d 146 pounds
- 19 Remembering that 1 kg = 2.2 pounds, John's weight in kg would be
- a 61.64 kg
 - b 62.62 kg
 - c 63.02 kg
 - d 63.63 kg

- 20 Mary is 63 inches tall. This measurement is also approximately
- a 155 cm
 - b 157 cm
 - c 160 cm
 - d 163 cm

ANSWERS

Check your answers. If you have made an error, perform the calculation once more and then check it with your calculator.

- | | |
|----|---|
| 1 | d |
| 2 | b |
| 3 | c |
| 4 | c |
| 5 | b |
| 6 | b |
| 7 | d |
| 8 | b |
| 9 | b |
| 10 | a |
| 11 | b |
| 12 | c |
| 13 | d |
| 14 | a |
| 15 | c |
| 16 | b |
| 17 | c |
| 18 | a |
| 19 | d |
| 20 | c |

MODULE SIX: COMPLEX CALCULATIONS

ASSESSMENT TWO: Complex Medication Administration

Write down the correct answer for each of the following computations. Try to complete this exercise in 20 minutes. Avoid using a calculator unless this is permitted at your place of learning.

- 1 Melissa is to have 1.5 grams of drug A/day, to be given 4/24. Stock available is 125 mg scored tablets. The number of tablets/dose that should be given is
 - a 1/2 tablet
 - b 1 tablet
 - c 1 1/2 tablets
 - d 2 tablets

- 2 Suzie is to have 0.25 mg of drug B per day, to be given 6/24. Stock available is 62.5 mcg tablets. For a single dose she should receive
 - a 4 tablets
 - b 3 tablets
 - c 2 tablets
 - d 1 tablet

- 3 Mr Wilkinson is to have 75 mg of drug C. Stock in the ward is 100 mg/2 ml. The volume of drug C required for this order is
 - a 2 ml
 - b 1.75 ml
 - c 1.5 ml
 - d 1.25 ml

- 4 Mrs Cook is to have 7500 units of drug D. Stock in the ward is 5000 units/0.2 ml. The volume required for this order is
- a 0.1 ml
 - b 0.3 ml
 - c 0.5 ml
 - d 0.7 ml
- 5 Tommy, who weighs 15 kg, is to have 20 mg/kg/day of drug E. This medication is to be given 8/24. Stock is 125 mg/5 ml. For a single dose you should pour
- a 1 ml
 - b 2 ml
 - c 3 ml
 - d 4 ml
- 6 Claire is to have 1 gram of drug F per m^2 of BSA per day, to be given in two equally divided doses. Claire's BSA is $0.6 m^2$ and drug F is available as a mixture of 125 mg/5 ml. The volume of drug F required for a single dose is
- a 6 ml
 - b 8 ml
 - c 10 ml
 - d 12 ml
- 7 Chris is to have 800 mg of drug G which is available as 1 gram of powder in a 10 ml vial. When reconstituted, drug G will displace 0.7 ml of fluid. The amount of sterile fluid required to reconstitute drug G to a concentration of 200 mg/1 ml is
- a 10 ml
 - b 9.3 ml

- c 5 ml
- d 4.3 ml
-
- 8 Drug H is to be reconstituted to a concentration of 250 mg/ml. Drug H is also available as 1 gram of powder and will displace 1 ml of fluid on reconstitution. The volume of sterile fluid required for this order is
- a 3 ml
- b 4 ml
- c 9 ml
- d 10 ml
-
- 9 Nellie has an intravenous infusion in which 90 ml remain in the bag. This infusion is dripping at the rate of 45 drops minute via a drop factor of 20 drops/ml. The number of minutes that this infusion will take to complete is
- a 40 minutes
- b 45 minutes
- c 50 minutes
- d 55 minutes
-
- 10 James has 50 ml of intravenous fluid left in the 0.5 L bag. This fluid is dripping at 40 drops/minute via a micro-dropper. Time taken to complete this infusion will be
- a 100 minutes
- b 75 minutes
- c 50 minutes
- d 25 minutes
-
- 11 Susan is receiving an infusion at the rate of 2 ml/minute via a line with a drop factor of 20 drops/ml. The number of drops/minute that would deliver 2 ml are

- a 30
- b 40
- c 50
- d 60

12 Mary's infusion is dripping at the rate of 45 drops/minute, via a micro-dropper. The volume per hour that Mary is receiving from this infusion is

- a 45 ml
- b 50 ml
- c 55 ml
- d 60 ml

13 8 ml of medication has been added to 42 ml of fluid in the burette on Ron's infusion line. The drop factor for this line is 20 drops/ml. This medicated solution is to infuse over 15 minutes so the rate of flow in drops/minute should be

- a 52
- b 62
- c 67
- d 70

14 Olive has a medicated infusion of 60 ml which is to complete in 40 minutes. The drop factor for this line is 20 drops/ml. The number of drops/minute should be

- a 20
- b 30
- c 40
- d 50

- 15 Mrs Rome has a medicated infusion with 60 mg of drug J in 60 ml of fluid. This solution is to infuse at the rate of 2.5 ml/hour, after commencing with a bolus dose of 5 mg over 4 minutes. The ml/hour required for this bolus dose is
- a 75
 - b 60
 - c 45
 - d 30
- 16 Mr Lennard has a medicated infusion with 450 mg of drug K in 100 ml of fluid. This solution is delivering 4 ml/hour. A bolus dose of 18 mg is to be given over a 3-minute period. The ml/hour required for this bolus dose is
- a 100
 - b 80
 - c 60
 - d 50
- 17 Jason, who weighs 60 kg, has been ordered 150 mg/kg of drug L, to be given intravenously over a 30-minute period. Stock in the department is a 20% solution of drug L in a 250 ml bag of fluid. The volume/hour required for this 30-minute order is
- a 90 ml
 - b 60 ml
 - c 45 ml
 - d 30 ml
- 18 Mr Tate, who weighs 80 kg, is to have 200 mg/kg of drug M, to be given intravenously over 45 minutes. Stock on hand is a 10% solution in 250 ml. The volume/hour required for this 45-minute order is
- a 160 ml

- b 213.3 ml
- c 240 ml
- d 240.5 ml

19 Clive, who weighs 75 kg, has been ordered drug N at the rate of 3 mcg/kg/minute. The prepared solution contains 50 mg of drug N in 250 ml of fluid. The volume/hour required for this order is

- a 52.5 ml
- b 67.5 ml
- c 75.5 ml
- d 82.5 ml

20 Elizabeth is to receive an infusion of 1250 units of drug P/hour. Prepared stock is 25 000 units in a 500 ml solution. The ml/hour required for this order would be

- a 15
- b 20
- c 25
- d 30

ANSWERS

- | | |
|----|---|
| 1 | d |
| 2 | d |
| 3 | c |
| 4 | b |
| 5 | d |
| 6 | d |
| 7 | d |
| 8 | a |
| 9 | a |
| 10 | b |
| 11 | b |
| 12 | a |
| 13 | c |
| 14 | b |
| 15 | a |
| 16 | b |
| 17 | a |
| 18 | b |
| 19 | b |
| 20 | c |

MODULE FIVE: CALCULATING COMPLEX VOLUMES

ASSESSMENT TWO: Complex Medication Administration

Write down the correct answer for each of the following computations. Try to complete this exercise in 20 minutes. Avoid using a calculator unless this is permitted at your place of learning.

Mrs Ellie Collins has been admitted to the ward for abdominal surgery in the morning. She has informed the medical officer that she smokes 25 cigarettes each day and has been on the contraceptive pill for 10 years. You have been asked to follow through with her care for the next two days, with some guidance from the registered nurse.

- 1 Nitrazepam (Mogadon), 10 mg, has been ordered to help her to sleep. Stock is 5 mg scored tablets. The number of tablets that she should be given is
 - a 1/2 a tablet
 - b 1 tablet
 - c 1 1/2 tablets
 - d 2 tablets

- 2 Next morning after handover, her premedication is due. She is to have 80 mg of pethidine and 400 mcg of Atropine. Pethidine is available as 100 mg/2 ml. The volume required for this order is
 - a 1.9 ml
 - b 1.8 ml
 - c 1.7 ml
 - d 1.6 ml

- 3 Atropine is available as 0.5 mg/ml. The volume required for this order is
- a 0.2 ml
 - b 0.4 ml
 - c 0.6 ml
 - d 0.8 ml
- 4 An intravenous infusion is established. 1 L of 0.9% sodium chloride is to infuse over 6 hours. The ml/hour that will be run into the burette is
- a 125
 - b 152
 - c 167
 - d 176
- 5 The drop factor for the giving set is 20 drops/ml. The number of drops/minute that will be delivered from this order is
- a 42
 - b 51
 - c 56
 - d 59
- 6 Mrs Collins returns to the ward at 12.15. Her intravenous infusion is dripping at the rate of 66 drops/minute. The ml/hour that this rate of flow would deliver is
- a 167
 - b 198
 - c 206
 - d 210

- 7 You assist the registered nurses to set up a morphine infusion. Mrs Collins is to have 50 mg of morphine in a 50 ml solution. Morphine is available as 10 mg/ml, the volume required for this order is
- a 3 ml
 - b 4 ml
 - c 5 ml
 - d 6 ml
- 8 The solvent (sterile normal saline) required to complete this task is
- a 47 ml
 - b 46 ml
 - c 45 ml
 - d 44 ml
- 4 The concentration of this medicated solution is
- a 1 mg/ml
 - b 3 mg/ml
 - c 5 mg/ml
 - d 7 mg/ml
- 5 This morphine solution is to last for 20 hours. The volume/hour required to deliver this medicated solution in the prescribed time is
- a 2.5 ml
 - b 3 ml
 - c 3.5 ml
 - d 4 ml

- 6 Intravenous metoclopramide (Maxolon) 7.5 mg has been ordered for Mrs Collins's nausea. From available stock of 10 mg/2 ml, the volume she should be given is
- a 2 ml
 - b 1.5 ml
 - c 1 ml
 - d 0.5 ml
- 7 Subcutaneous Heparin, 5000 units, is ordered. Stock on hand is 25 000 units/ml. The volume required for this order is
- a 0.8 ml
 - b 0.6 ml
 - c 0.4 ml
 - d 0.2 ml
- 13 Mrs Collins asks for extra pain relief. She is permitted a bolus dose of 3 mg of morphine over a 3-minute period. The volume of fluid/hour (for 3 minutes only) that will deliver this dose is
- a 30 ml/hour
 - b 45 ml/hour
 - c 60 ml/hour
 - d 75 ml/hour
- 14 Her second bag of intravenous fluid, 5% dextrose, is due to commence. This 1 L bag is to last for 8 hours. The volume/hour required from this order is
- a 125 ml
 - b 137 ml
 - c 150 ml
 - d 167 ml

- 15 The number of drops/minute that will deliver this rate of flow is
- a 42
 - b 46
 - c 50
 - d 56
- 16 Next day when you return to duty, Mrs Collins's infusion is dripping at the rate of 30 drops/minute. From this rate of flow, she is receiving
- a 60 ml/hour
 - b 90 ml/hour
 - c 120 ml/hour
 - d 150 ml/hour
- 17 A 250 ml infusion of 0.9% sodium chloride containing 10 000 units of Heparin is to be set up. Stock available is 25 000 units/ml. The volume of Heparin required for this order is
- a 0.2 ml
 - b 0.4 ml
 - c 0.6 ml
 - d 0.8 ml
- 18 The Heparin solution is to infuse at the rate of 500 units/hour, via a volumetric pump. The volume/hour that will deliver this order is
- a 12.5 ml
 - b 18 ml
 - c 25 ml
 - d 32 ml

- 19 The number of hours that this infusion will last is
- a 5
 - b 10
 - c 15
 - d 20
- 20 The antibiotic flucloxacillin sodium (Flopen) 500 mg 6/26 has been ordered. Stock is equivalent to 0.25 g/capsules. The number of capsules/dose is
- a 4
 - b 3
 - c 2
 - d 1

ANSWERS

- | | |
|----|---|
| 1 | d |
| 2 | d |
| 3 | d |
| 4 | c |
| 5 | c |
| 6 | b |
| 7 | c |
| 8 | c |
| 9 | a |
| 10 | a |
| 11 | b |
| 12 | d |
| 13 | c |
| 14 | a |
| 15 | a |
| 16 | b |
| 17 | b |
| 18 | a |
| 19 | d |
| 20 | c |

MODULE THREE: INJECTIONS

ASSESSMENT TWO: Medication and Fluid Administration, Bolus Doses

Write down the correct answer for each of the following computations. Try to complete this exercise in 30 minutes. Avoid using a calculator unless this is permitted at your place of learning.

Ms Jackie Robinson is a young woman who has been admitted to hospital following a motor vehicle accident in which she sustained fractures to her pelvis and left femur. Jackie is a diabetic and has a three-week-old baby as a boarder. She has an intravenous infusion of 1 L of fluid and the drop factor for the giving set is 20 drops/ml. You have been assigned to care for her and the baby, under the guidance of a registered nurse.

- 1 When you visit Jackie, she asks for 'something for a headache'. You check her medication sheet and note she can have 1 gram of paracetamol for mild to moderate pain 4/24 PRN. Stock is 500 mg/tablet, so the number of tablets that she should be given is
 - a 1
 - b $1 \frac{1}{2}$
 - c 2
 - d $2 \frac{1}{2}$

- 2 She has an intravenous infusion of 1 L of 0.9% of sodium chloride which is infusing at the rate of 40 drops/minute. The volume/hour that is currently being delivered is
 - a 80 ml
 - b 100 ml
 - c 120 ml
 - d 140 ml

- 3 Jackie is being prepared for the operating theatre to have her fractured femur stabilised. As part of her premedication she is to have 60 mg of pethidine . Stock is 100 mg/2 ml, so the volume required for this order is
- a 0.8 ml
 - b 1 ml
 - c 1.2 ml
 - d 1.4 ml
- 4 Atropine is also due to be given. She is to have 500 mcg. Stock is 0.5 mg/ml. The volume required is
- a 0.4 ml
 - b 0.6 ml
 - c 0.8 ml
 - d 1 ml
- 5 While Jackie is out of the ward you have been asked to bath, weigh, measure and feed the infant. The baby's weight is 3.24 kg and her length is 0.51 m. These measurements could also be expressed as
- a 3420 grams, 50 cm
 - b 3240 grams, 50 mm
 - c 3240 grams, 51 cm
 - d 3420 grams, 51 mm
- 6 Baby Robinson should have approximately 460 kilojoules/kg/day. Her daily kilojoule intake should be
- a 1260
 - b 1370

- c 1490
- d 1520

7 If the baby has seven feeds each day, her approximate kilojoule intake/feed would be

- a 196
- b 213
- c 245
- d 262

8 The breast milk in the jug in the fridge contains approximately 280 kilojoules/100 ml of milk. The volume of milk/feed that the infant should have is approximately

- a 76 ml
- b 102 ml
- c 106 ml
- d 110 ml

Jackie returns to the ward. She is to have a morphine infusion to deliver pain relief via a syringe driver. You note that the order is for 45 mg of morphine in 60 ml of fluid. You assist the registered nurses to set up this infusion.

9 Stock of morphine is 15 mg/ml, so the volume required for this order is

- a 2 ml
- b 2.5 ml
- c 3 ml
- d 4 ml

10 The amount of 0.9% sodium chloride required to complete this task is

- a 58 ml

- b 57.5 ml
 - c 57 ml
 - d 56 ml
- 11 The pain relief infusion is to last for 24 hours. The volume/hour that should be delivered from this order is
- a 1.5 ml/hour
 - b 1.75 ml/hour
 - c 2 ml/hour
 - d 2.5 ml/hour
- 12 The concentration, in mg/ml, of this medicated solution is
- a 0.5 mg/ml
 - b 0.75 mg/ml
 - c 1 mg/ml
 - d 1.25 mg/ml
- 13 This infusion is to commence with a bolus dose of 4.5 mg of morphine over a 3-minute period. The number of mg/minute that she would receive from this order is
- a 1.5
 - b 1.75
 - c 2
 - d 2.25
- 14 The volume of fluid that contains the mg/minute in this bolus dose is
- a 0.5 ml
 - b 0.75 ml
 - c 1 ml

d 2 ml

15 The volume/hour that will deliver this bolus dose over the 3-minute period is

a 50 ml

b 75 ml

c 100 ml

d 120 ml

16 Jackie's intravenous infusion, 1 L of 5% dextrose (she is not currently taking food or fluids), has 70 ml remaining and is dripping at 60 drops/minute. Remembering that the drop factor for the giving set is 20 drops/ml, this infusion should complete in

a 20 minutes

b 23 minutes

c 25 minutes

d 27 minutes

17 Jackie has been ordered 10 units of Actrapid insulin. Remembering that insulin is available as 100 units/ml, the volume drawn up in the insulin syringe is equivalent to

a 0.1 ml

b 0.12 ml

c 0.18 ml

d 0.2 ml

18 Intravenous metoclopramide (Maxolon) 7.5 mg has been ordered for Jackie's nausea. Stock in the ward is 10 mg/2 ml. The volume required for this order is

a 0.5 ml

b 1 ml

c 1.5 ml

d 2 ml

19 Subcutaneous Heparin 6000 units is to be given, using an 0.5 ml insulin syringe. Stock is 5000 units/0.2 ml, so the volume required is

a 0.18 ml

b 0.24 ml

c 0.27 ml

d 0.29 ml

20 Sliding-scale insulin has been ordered for Jackie while she is not eating. She is to have no insulin if her reading is below 8 mmol/L, but if her reading is 8 mmol/L, she is to have 2 units of insulin. For every 4 mmol/L above 8 mmol/L (e.g. 12 or 16 mmol/L), she is to have an additional 2 units. The reading you have just taken is 22 mmol/L. The number of units of insulin she should receive is

a 6 units

b 8 units

c 10 units

d 12 units

ANSWERS

- | | |
|----|---|
| 1 | c |
| 2 | c |
| 3 | c |
| 4 | d |
| 5 | c |
| 6 | c |
| 7 | b |
| 8 | a |
| 9 | c |
| 10 | c |
| 11 | d |
| 12 | b |
| 13 | a |
| 14 | d |
| 15 | d |
| 16 | b |
| 17 | a |
| 18 | c |
| 19 | b |
| 20 | b |

MODULE TWO: MEDICATIONS

ASSESSMENT TWO: Oral Medications

Write down the correct answer for each of the following computations. Try to complete this exercise in 20 minutes. Avoid using a calculator unless this is permitted at your place of learning.

- 1 Mrs Jones is ordered 1.6 mg/day of drug A, to be given in four equally divided doses. Each dose of medication is
 - a 600 mg
 - b 600 mcg
 - c 400 mg
 - d 400 mcg

- 2 She is also to have 125 mcg of drug B. Stock in the ward is 0.25 mg tablets. She should be given
 - a 1/2 tablet
 - b 1 tablet
 - c 1 1/2 tablets
 - d 2 tablets

- 3 Stock of drug C is 0.6 g tablets. Mrs Jones is to have 600 mg of this drug BD. BD means that she will have this medication
 - a once per day
 - b twice per day
 - c 3 times per day
 - d every 8 hours

- 4 With reference to Q3, Mrs Jones should be given
 - a 1/2 tablet per dose
 - b 1 tablet per dose
 - c 2 tablets per dose
 - d 3 tablets per dose

- 5 Mrs Jones is to have 375 mg of drug D. Stock in the ward is 0.75 g tablets. She should be given
- a 1/2 tablet per dose
 - b 1 tablet per dose
 - c 1 1/2 tablets per dose
 - d 2 tablets per dos
- 6 Mary is five years old and she is to have 250 mg of drug E. Stock in the ward is a mixture with 25 mg of drug E per 1 ml of mixture. The volume of this medication per dose should be
- a 2.5 ml
 - b 5 ml
 - c 7.5 ml
 - d 10 ml
- 7 Mary is also ordered drug F, at the rate of 20 mg per kilogram of body weight per day. If Mary weighs 25 kg, her daily dose of drug F would be
- a 250 mg
 - b 500 mg
 - c 750 mg
 - d 1 gram
- 8 Mary is to have drug F, QID. This means that the medication will be given
- a once each day
 - b twice each day
 - c three times each day
 - d four times each day

- 9 A single dose of drug F for Mary would contain
- a 50 mg
 - b 75 mg
 - c 100 mg
 - d 125 mg
- 10 Available stock of drug F for Mary is a mixture with a concentration of 25 mg per ml. The volume of this medication that should be poured each dose is
- a 2.5 ml
 - b 5 ml
 - c 7.5 ml
 - d 0 ml
- 11 Mr Smith is to have a statim dose of 10 mg of drug G. A statim dose is one that is given
- a whenever necessary
 - b three times a day
 - c once only, immediately
 - d when he is in pain
- 12 With reference to Mr Smith's dose of drug G, if stock available is 5 mg per tablet, you would expect him to be given
- a 2 tablets
 - b 1 1/2 tablets
 - c 1 tablet
 - d 1/2 tablet
- 13 Mr Smith is also having drug H, 62.5 mcg TDS. This medication is available as 125 mcg tablets. For this order he should receive
- a 1/4 tablet, 3 times per day
 - b 1/2 tablet, 3 times per day
 - c 1/2 tablet twice each day

- d 2 tablets every 8 hours
- 14 Christobelle is eight. She is to have 0.6 grams of drug J each day, to be given 6/24. She should be given:
- a 100 mg per dose
- b 150 mg per dose
- c 200 mg per dose
- d 300 mg per dose
- 15 You are aware that 6/26 means that Christobelle will be given this medication
- a every 2 hours
- b every 4 hours
- c every 6 hours
- d every 8 hours
- 16 Drug J, the medication ordered for Christobelle, is available as a mixture with a concentration of 20 mg per ml. For a single dose she should be given
- a 2.5 ml
- b 5 ml
- c 7.5 ml
- d 10 ml
- 17 Christobelle is also to have 12 ml of drug K. Drug K is available with a strength of 24 mg per ml. The amount of drug K in this dose of medication is:
- a 206 mg
- b 242 mg
- c 264 mg
- d 288 mg

- 18 Christobelle weighs 21 kg and the recommended dose of drug K for her is 15 mg per kg of body weight. Is the dose you have poured for her
- a much greater than recommended
 - b higher than recommended dose
 - c close to the recommended dose
 - d an insufficient dose for her size
- 19 Ms Collins is to have 375 mcg of drug K. Stock available is 125 mcg tablets. For this dose she should be given
- a 1 tablet
 - b 2 tablets
 - c 3 tablets
 - d 4 tablets
- 20 She is also to have 15 ml of drug L. Stock on hand is a 200 ml bottle with a concentration of 5 mg per ml. The number of mg per dose would be
- a 100
 - b 75
 - c 50
 - d 25

ANSWERS

- | | |
|----|---|
| 1 | d |
| 2 | a |
| 3 | b |
| 4 | b |
| 5 | a |
| 6 | d |
| 7 | b |
| 8 | d |
| 9 | d |
| 10 | b |
| 11 | c |
| 12 | a |
| 13 | b |
| 14 | b |
| 15 | c |
| 16 | c |
| 17 | d |
| 18 | c |
| 19 | c |
| 20 | b |

MODULE FOUR: PAEDIATRIC DOSAGES

ASSESSMENT TWO: Paediatric Medication and Fluid Administration

Write down the correct answer for each of the following computations. Try to complete this exercise in 20 minutes. Avoid using a calculator unless this is permitted at your place of learning.

You have been allocated one child to care for today, under the guidance of the registered nurse. Sally is 7 years old, weighs 23 kg and is scheduled for an appendicectomy this morning. Her premedication is due. She has been ordered 30 mg of pethidine and 200 mcg of Atropine. The following questions relate to Sally's care.

- 1 Pethidine is available as 100 mg/2 ml. The volume to be drawn up should be
 - a 0.4 ml
 - b 0.6 ml
 - c 0.8 ml
 - d 1 ml

- 1 For a child of Sally's age, the recommended dose of pethidine is 0.5 to 2 mg/kg, so the dose ordered for Sally is
 - a far too high
 - b too high
 - c within the normal range
 - d too low to be effective

- 3 Atropine is available as 0.5 mg/ml. The volume required for this order is
 - a 0.4 ml
 - b 0.6 ml

- c 0.8 ml
- d 1 ml
- 4 Sally returns to the ward from Recovery and has an intravenous infusion in place. 1 L of 0.9% sodium chloride is to last for 12 hours. The volumetric pump should be delivering
- a 52.35 ml/hour
- b 64.66 ml/hour
- c 76.25 ml/hour
- d 83.33 ml/hour
- 5 Sally's appendix was very inflamed, so an antibiotic has been commenced. She is to have intravenous Gentamicin, 5 mg/kg/day, in two equally divided doses. A single dose of this medication would be
- a 52.25 mg
- b 57.5 mg
- c 61.75 mg
- d 73.5 mg
- 6 Stock in the ward is 80 mg/2 ml. The volume required for this order would be
- a 1.2 ml
- b 1.3 ml
- c 1.4 ml
- d 1.5 ml
- 7 This medication is to be added to a 50 ml bag of 0.9% sodium chloride and infused over one hour, using a micro-dropper. The drops/minute required for this order are
- a 48 dpm
- b 49 dpm**

- c 50 dpm
- d 51 dpm
-
- 8 Sally calls you and tells you that her pain is bad. An intravenous pain relief infusion is ordered and Sally is to have 8 mg/kg, over a 20-hour period. This is to be delivered via a syringe driver connected to the main infusion line. The dose of pethidine required for this order is
- a 184 mg
- b 205 mg
- c 230 mg
- d 300 mg
-
- 9 Pethidine stock is 100 mg/2 ml. The volume of pethidine required for this order would be
- a 3.5 ml
- b 3.7 ml
- c 3.8 ml
- d 3.9 ml
-
- 10 The volume of 0.9% sodium chloride required to make a total volume of 50 ml for this infusion is
- a 46.5 ml
- b 46.3 ml
- c 46.2 ml
- d 46.1 ml
-
- 11 This medicated solution is to last for 20 hours. The rate of flow in ml/hour should be
- a 3.5 ml/hour
- b 2.5 ml/hour

- c 1.5 ml/hour
- d 0.5 ml/hour
- 12 The concentration, in mg/ml, of this medicated solution is
- a 2.46 mg/ml
- b 2.86 mg/ml
- c 3.68 mg/ml
- d 3.46 mg/ml
- 13 The pethidine infusion is commence with a bolus doses of 3 ml of medicated solution.
The approximate dose of intravenous pethidine that Sally would receive from this order is
- a 8 mg
- b 8.75 mg
- c 10.25 mg
- d 11 mg
- 14 Next day when you return to work, you are to continue with your care of Sally. You note that her volumetric pump is delivering her infusion at the rate of 50 ml/hour. The 0.5 L bag should last
- a 20 hours
- b 15 hours
- c 10 hours
- d 5 hours
- 15 Today, Sally is permitted 100 ml of oral fluid every 2 hours. If this volume of fluid is consumed over a 10 hour period, the volume charted on her FBC would be
- a 450 ml
- b 500 ml

- c 550 ml
 - d 600 ml
- 16 A child of Sally's weight is permitted 1000 ml for the first 10 kg of weight, plus 50 ml/kg above this weight. Sally's daily fluid intake should be approximately
- a 1500 ml
 - b 1550 ml
 - c 1600 ml
 - d 1650 ml
- 17 If Sally is having 50 ml/hour via her infusion, plus the oral fluid in Q 15, her daily intake would be
- a as recommended
 - b slightly more than recommended
 - c too high
 - d much too high
- 18 The intravenous antibiotic has now been discontinued and Sally is to have Amoxycillin trihydrate, 20 mg/kg/day, to be given 6/24. A single dose of this medication would be
- a 135 mg
 - b 125 mg
 - c 120 mg
 - d 115 mg
- 19 Amoxycillin is available as a mixture with a concentration of 125 mg/5 ml. The volume that should be poured for a single dose would be
- a 4.8 ml
 - b 4.6 ml

c 4.4 ml

d 4.2 ml

20 Sally is ordered 12 ml of paracetamol. The concentration of this medication is 24 mg/ml. The dose of paracetamol she will receive from this order is

a 300 mg

b 294 mg

c 288 mg

d 264 mg

ANSWERS

- | | |
|----|---|
| 1 | b |
| 2 | c |
| 3 | a |
| 4 | d |
| 5 | b |
| 6 | c |
| 7 | d |
| 8 | a |
| 9 | b |
| 10 | b |
| 11 | b |
| 12 | c |
| 13 | d |
| 14 | c |
| 15 | b |
| 16 | d |
| 17 | b |
| 18 | d |
| 19 | b |
| 20 | c |