PRE-ACCREDITATION MATHS & LITERACY FOR AGED CARE

graduated exercises and practice exam

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SAMPLE CHAPTER

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PRE-ACCREDITATION

Maths & Literacy for Aged Care

Contents

SAMPLE CHAPTER

MATHEMATICS

Unit 4: General Mathematics

Short-answer questions

Specific instructions to students

- This unit will help you to improve your general mathematical skills.
- Read the following questions and answer all of them in the spaces provided.
- You may not use a calculator.
- You need to show all working.

QUESTION 1

State the unit of measurement that you would use to measure:

a the length of sheets for a bed

Answer:

b the temperature of a steriliser

Answer:

c the amount of antiseptic cream

Answer:

d the weight of a hospital bed

Answer:

e the voltage of a power point.

Answer:

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QUESTION 2

Give examples of how the following might be used in the aged-care industry.

a percentages

Answer:

b decimals

Answer:

c fractions

Answer:

d mixed numbers

Answer:

e ratios

Answer:

QUESTION 3

Convert the following units.

a 12 kg to grams

Answer:

b 4 tonnes to kilograms

Answer:

c 120 cm to metres

Answer:

d 1140 mL to litres

Answer:

e 1650 g to kilograms

Answer:

f 1880 kg to tonnes

Answer:

g 13 m to centimetres

Answer:

h 4.5 L to millilitres

Answer:

QUESTION 4

Write the following in descending order.

0.4 0.04 4.1 40.0 400.00 4.0

Answer:

QUESTION 5

Write the decimal number that is between:

a 0.2 and 0.4

Answer:

b 1.8 and 1.9

Answer:

c 12.4 and 12.5

Answer:

d 28.3 and 28.4

Answer:

e 101.5 and 101.7

Answer:

QUESTION 6

Round off the following numbers to two (2) decimal places.

a 12.346

Answer:

b 2.251

Answer:

c 123.897

Answer:

d 688.882

Answer:

e 1209.741

Answer:

QUESTION 7

Estimate the following by approximation.

a $1288 \times 19 =$

Answer:

b $201 \times 20 =$

Answer:

c $497 \times 12.2 =$

Answer:

d $1008 \times 10.3 =$

Answer:

e $399 \times 22 =$

Answer:

f $201 - 19 =$

Answer:

g $502 - 61 =$

Answer:

h $1003 - 49 =$

Answer:

i $10\,001 - 199 =$

Answer:

j $99.99 - 39.8 =$

Answer:

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QUESTION 8

What do the following add up to?

a $4, $4.99 and $144.95

Answer:

b 8.75, 6.9 and 12.55

Answer:

c 65 mL, 18 mL and 209 mL

Answer:

d 21.3 g, 119 g and 884.65 g

Answer:

QUESTION 9

Subtract the following.

a 2338 from 7117

Answer:

b 1786 from 3112

Answer:

c 5979 from 8014

Answer:

d 11 989 from 26 221

Answer:

e 108 767 from 231 111

Answer:

QUESTION 10

Use division to solve the following

a $2177 \div 7 =$

Answer:

b $4484 \div 4 =$

Answer:

c $63.9 \div 0.3 =$

Answer:

d $121.63 \div 1.2 =$

Answer:

e $466.88 \div 0.8 =$

Answer:

The following information is provided for question 11.

To solve using BODMAS, in order from left to right, solve the **B**rackets first, then **O**f, then **D**ivision, then **M**ultiplication, then **A**ddition and lastly **S**ubtraction. The following example has been done for your reference.

EXAMPLE:

Solve $(4 \times 7) \times 2 + 6 - 4$.

STEP 1

Solve the Brackets first: $(4 \times 7) = 28$.

STEP 2

No Division so next solve Multiplication: $28 \times 2 = 56$.

STEP 3

Addition is next: $56 + 6 = 62$.

STEP 4

Subtraction is the last process: $62 - 4 = 58$.

FINAL ANSWER:

58

QUESTION 11

Using BODMAS, solve:

a $(6 \times 9) \times 5 + 7 - 2 =$

Answer:

b $(9 \times 8) \times 4 + 6 - 1 =$

Answer:

c $3 \times (5 \times 7) + 11 - 8 =$

Answer:

d $5 \times (8 \times 3) + 9 - 6 =$

Answer:

e $7 + 6 \times 3 + (9 \times 6) - 9 =$

Answer:

f $6 + 9 \times 4 + (6 \times 7) - 21 =$

Answer:

Unit 11: Squaring Numbers

Section A: Introducing square numbers

Short-answer questions

Specific instructions to students

- This section is designed to help you to improve your skills and to increase your speed in squaring numbers.
- Read the questions below and answer all of them in the spaces provided.
- You may not use a calculator.
- You need to show all working.

Any number squared is multiplied by itself.

EXAMPLE

4 squared $= 4^2 = 4 \times 4 = 16$

QUESTION 1

$6^2 =$

Answer:

QUESTION 2

$8^2 =$

Answer:

QUESTION 3

$12^2 =$

Answer:

QUESTION 4

$3^2 =$

Answer:

QUESTION 5

$7^2 =$

Answer:

QUESTION 6

$11^2 =$

Answer:

QUESTION 7

$10^2 =$

Answer:

QUESTION 8

$9^2 =$

Answer:

QUESTION 9

$2^2 =$

Answer:

QUESTION 10

$4^2 =$

Answer:

Section B: Applying square numbers to the industry

Worded practical problems

Specific instructions to students

- The worded questions make the content relevant to everyday situations.
- Read the questions below and answer all of them in the spaces provided.
- You may not use a calculator.
- You need to show all working.

QUESTION 1

If there are 5×5 bottles of purified water in a box, how many bottles are there in total?

Answer:

QUESTION 2

Insect repellant bottles are delivered to an aged-care facility stacked 6×6. What is the total number of bottles?

Answer:

QUESTION 3

There are 12×12 250 mL orange juice containers packed into a box? How many are in the box?

Answer:

QUESTION 4

A dining-room floor has an area that is 15×15 metres. How much floor area is this in square metres (m^2)?

Answer:

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QUESTION 5

A merchandise box contains tubes of antiseptic cream that are in rows of 8×8. How many tubes of the product are there?

Answer:

QUESTION 6

A manager unpacks two boxes that have recently arrived at the facility. The first box contains 4×4 plastic bottles of 15 mL eye drops. The second box contains pain relief tablets that are packed in a 3×3 formation. How many stock items are there in total?

Answer:

QUESTION 7

A box of cleaning products is delivered to a facility. These are used by staff to assist with daily home duties. If they are packed in a 20×20 formation, how many are there?

Answer:

QUESTION 8

A storeroom stocks the following: 5 × 5 cakes of soap; 3 × 3 100 mL cleanser bottles and 10 × 10 wipes. How many items of stock are there in total?

Answer:

QUESTION 9

The following items are stocked by a disability facility: 5 × 5 bottles of cooking oil for meal preparation, 5 × 5 packets of flavored tea and 5 × 5 packets of low-GI sugar. How many items are there in total?

Answer:

QUESTION 10

A first-aid kit consists of the following items: 3 × 3 waterproof band aids, 2 × 2 gauze dressings, 2 × 2 round band aids and 3 × 3 plain band aids. How many items are there in total?

Answer:

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Unit 12: Discounts

Short-answer questions

Specific instructions to students

- This unit will help you to calculate discounts.
- Read the questions below and answer all of them in the spaces provided.
- You may not use a calculator.
- You need to show all working.

QUESTION 1

A client books in for five physiotherapy treatments and receives the sixth treatment for free. The client prepays and the total comes to $350. The client receives a 20% discount.

a How much is taken off for the discount?

Answer:

b How much is the final cost for the treatments?

Answer:

QUESTION 2

A client requires repairs to her glasses as recommended by an optometrist. The client receives a 10% discount on the repairs. The repairs cost $275 before the discount is given.

a How much is the discount?

Answer:

b How much will the repairs cost after the discount?

Answer:

QUESTION 3

A pharmacy charges $45.50 for the first script to be filled for a client. Each script after the first is then charged at $37 for the same prescription. The client has three scripts that need to be filled.

a How much will be charged?

Answer:

b How much will the client be charged after a 10% discount?

Answer:

QUESTION 4

A client needs the lawns mowed and trimmed. The mowing company charges $55. The client gets a 30% discount as a long-term customer.

a How much will the discount be?

Answer:

b What is the final cost?

Answer:

QUESTION 5

Five clients in a retirement village require the following services around their homes: front and back lawns mowed, trimmed and fertilised at a cost of $72; pavers cleaned at the front and back of the home at a cost of $43; front and back gardens weeded and fertilised for $68; furniture polished for $28.50 and carpets cleaned in all rooms for $55.50.

a What is the total cost for all services?

Answer:

b The retirement village receives a discount of 15%. How much is the discount?

Answer:

c What is the final bill for all five clients?

Answer:

Alamy / © Chris Cooper-Smith

QUESTION 6

A seafood dinner is ordered for several clients as part of Christmas festivities. The cost of the dinner for the clients comes to $445. A 15% discount is included as a one-off special for Christmas.

a How much is the discount worth?

Answer:

b What is the final cost?

Answer:

QUESTION 7

A client orders outdoor blinds to keep the afternoon sun from overheating her unit in summer. The cost is $228, but the client has a voucher for a 25% discount.

a What is the discount worth?

Answer:

b What is the final cost?

Answer:

QUESTION 8

A plumber is called to the retirement village to fix two leaking taps and change a seal in the gas heater. The bill comes to $121.50. A 10% discount is given.

a How much does the discount work out to be?

Answer:

b What is the final cost?

Answer:

QUESTION 9

Three clients are given a 15% discount on three different services. The first client needs two light globes changed, two fuses changed and the oven light replaced. This costs $64. The second client needs their outside light replaced, two fluorescent lights changed and the lounge-room light changed to a power saving globe. The cost is $102. The third client wants a heater element replaced. The cost is $77.

a What is the total cost for all three clients without the discount?

Answer:

b What is the discount amount?

Answer:

c What is the final cost for all three clients?

Answer:

QUESTION 10

Six clients at a residential-care facility need assistance with home duties. The six services needed are: indoor cleaning for $62; pest control inspection and treatment for $55; outdoor sweeping and maintenance of the patio area for $47; cleaning, adjusting and repairing blinds for $25; cleaning furniture and dusting for $17; and removing food from fridge, cleaning and replacing all food once it has been checked for freshness for $68. A discount of 10% is given.

a How much will the total be before using the discount?

Answer:

b How much will the discount take off?

Answer:

c What is the final cost for all six clients?

Answer: