Australian Government

AUSTRALIAN APPRENTICESHIPS

Your Life. Your Career. Your Future.

Plumbing

Practice Aptitude Quiz

Practice Aptitude Quiz

Part 1: About this quiz

Use this quiz to prepare for an Apprenticeship in Plumbing

This quiz:

- Is NOT a formal assessment tool or pre-requisite for any job application
- Shows key learning standards for the Plumbing industry
- Has been developed with the help of industry leaders, TAFE and high schools

Quiz details

This quiz will:

- Take approximately 60 minutes to complete
- Ask you numeracy and literacy questions specific to the Plumbing industry
- Assess your literacy and numeracy at a Year 11 standard
- Allow you to use a calculator
- Share correct answers at the end

Who should take this quiz?

You should complete this quiz if you:

- Are thinking about starting an Apprenticeship in the Plumbing industry
- Want to practise for a formal aptitude test

Need help with your literacy and numeracy skills?

If you want to improve your literacy and numeracy skills, reach out to any of the below:

- Australian Apprenticeship Support Network providers
- Your Registered Training Organisation when you start training
- Reading Writing Hotline:
  1300 655 506
  www.readingwritinghotline.edu.au
- Careers advisers and your teachers (if you're in high school)

More information about the Plumbing industry

Visit www.yourcareer.gov.au/industries/d/electricity-gas-water-waste-services

On this page you'll be able to:

- See the most popular Plumbing occupations
- Get general information and statistics about the industry
- Search for Plumbing courses

Practice Aptitude Quiz

How to use this quiz

This is an interactive form that can be filled out on your computer.

You can either:

- Fill it out on your computer; OR
- Print it out; OR
- Write your answers down on paper as you go.

Use the answers section at the end of the quiz to see how you went.

How to complete this quiz on your computer

1. Download and save the quiz onto your computer
2. Open the file from your computer
3. Fill in the form using a keyboard and mouse

Practice Aptitude Quiz

Part 2: The Quiz

Section 1: Language and Literacy

1. **The following text has 10 spelling errors in it. Correct those errors and list them in the order you find them in the text:**

To become a plumber requires compleshion of an apprenticeship in Plumbing, Gasfitting and Draining. Employers genraly require the completion of at least Year 10, with good resolts in English and Maths. You may be able to start training for this vocation wile still at school.

The lenth of trainin can vary and may involve both on-the-job and off-the-job componants. The off-the-job training is provided through Registered Training Organisations.

Plumbing, Gasfitting and Draining are licensed occupasions, which means that in addition to your formel qualifications, a lisence to work must be obtained by your local Licensing Authority.

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

Practice Aptitude Quiz

2. Write the correct spelling of the following words:

a. Bathroome	
b. Inspecter	
c. Ocupation	
d. Invioce	
e. Sprinklar	
f. Plumming	
g. Gassfitting	
h. Drainning	
i. Coper Pipe	
j. Sola Heating	

Read the following article and answer the questions that follow:

Installing a bath

To install a bath an understanding of all relevant Australian Standards and approved fixing methods is required.

The bath may be placed into position at the construction stage (when the building is at the frame stage) or may be left out until the floor, ceiling and walls have been clad. The bath is less likely to be damaged when installed after other trades have completed their work.

If installed during the construction stage, other tradespeople must take care not to damage the bath while under construction. It would be your responsibility to see that it was adequately protected.

Plumbers often have to install a bath in an existing home. This is a much more difficult task than in a building under construction because:

- Pipes need to be installed behind existing wall cladding;
- The bath's waterproofing and support rim must be in behind the wall cladding - this may require extensive work on the wall.

Usually the builder is responsible for levelling, waterproofing and securing the bath, but the plumber must check prior to commencing further work that these are correct. The following steps must be followed:

- Secure the bath;
- Allow adequate clearance for waterproofing to ensure a watertight installation;
- Level the bath.

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Questions:

3. **Why is it better to place the bath in position after the other trades have completed their work?**

4. **Usually the builder is responsible for the levelling, provision of waterproofing and securing of the bath. What steps must the plumber check to ensure that these are correct?**

5. **What must you have a knowledge of to install a bath?**

6. **Why is it more difficult to install a bath in an existing home?**

Practice Aptitude Quiz

Read the following article and answer the questions that follow:

The plumbing system of most homes comprises three things, namely the water supply system, the central drainage system, and the fixtures and appliances.

The main supply line makes the water available to all the taps in a home. This is provided either through the municipal corporation or council, or private suppliers. The supplier sets up a meter to measure the amount of water used in the home, and also issues a bill for water used and services delivered.

Generally, in a home, water enters from the main supply into the house. Then the main line is spilt into branches, with one of the two branches forming the supply to the water heater. After this connection is formed, the hot and the cold-water lines run parallel to one another. The fixtures and the various appliances that run on this system are connected to these lines.

Drainage systems generally work using gravity. The waste water produced flows downwards through a junction of large sized drain pipes, which then opens into vent pipes. The working of drain waste and vent piping is quite complex. The angle is specified so that the drainage pipes allow the flow of waste water through the sewer system with the help of gravity.

All waste water ultimately reaches the waste stack. From there it flows to the sewer line and exits the house. Sewer gas however is vented through the openings in the roof of the vent.

Plumbing is an essential and constantly used element of every household. Breakdowns in a household's plumbing system could create an urgent problem, may cause inconvenience and have the potential to cause damage to property.

Questions:

7. **What three things does the water supply system of most homes comprise of?**

8. **Why is the angle of how pipes are connected important for waste water?**

Practice Aptitude Quiz

9. **How is the disposal of waste water and sewer gas different?**

10. **What are the effects of a breakdown in a household plumbing system?**

Practice Aptitude Quiz

11. Read the following about Personal Protective Equipment (PPE) and then answer the questions that follow:

Personal protective clothing, overalls, hand protection and foot protection are often necessary and respiratory protective equipment may be required when dangerous gases and dusts are present.

Personal protective equipment (PPE) includes clothing, equipment and substances designed to be worn by a person to protect them from risks of injury or disease.

PPE is only to be used in the workplace where it is not reasonably practicable to control hazards by other means.

The information on the following page describes some PPE used to guard workers against specific hazards.

Gloves

Photo A

Breathing Mask

Photo B

Goggles

Photo C

Sign A

Sign B

Sign C

Sign D

Part of Body	**Some Potential Hazards**
Head	Falling objects
Face & Eyes	chemical splashes, fumes, sewage splashes,
Hearing:	Excessive noise
Respiratory:	Dust, fumes, vapours, concrete dust
Hands:	Abrasion, irritant substances, vibration, electric shock
Feet:	Crushing, slipping, abrasion, irritant substances, wetness, electric shock, static electricity, puncture, cold/heat

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Questions:

a. Measuring and sawing overhead PVC pipe is common in the plumbing industry. What PPE would you use to perform this task?

b. When jackhammering concrete, chunks may fly up and concrete dust is in the air. What PPE is of use in this situation?

c. Plumbers may be required to unblock a sewer What PPE helps protect a worker in this situation?

Practice Aptitude Quiz

Section 2: Numeracy

1. What unit from the list below would you use to measure:

kg	km/hr	AUD	min
ml	m^2	mm	°C

a. length	
b. time	
c. temperature	
d. weight	
e. area	
f. speed	
g. volume	
h. cost	

2. From the list of numbers below, select the one which is a:

3/8	25%	16.37
35°	5:4	3¼

a. percentage	
b. decimal number	
c. fraction	
d. mixed number	
e. ratio	
f. angle	

Practice Aptitude Quiz

3. Write the following as a number:

a. two thousand six hundred and thirty-four

b. fifty-six thousand and eighty-seven

4. Convert the following:

a. $2.41 to cents

b. 182 days to weeks

c. 3 hours and 12 seconds to seconds

d. 8 kilometres to metres

e. 3.5 kilograms to grams

5. One-day Peter worked 6 hrs and 35 min and on another day 4 hrs and 40 min. What was the total time Peter worked?

6. Jane the building clerk started work at 11:30 am and finished at 2:10 pm. How long did she work for?

Practice Aptitude Quiz

7. Find the total of the following:

a. $2 + $21.45 + $8.23

b. 18.32 + 471.019 + 315

c. 2.63 m + 50 cm

8. Subtract the following:

a. 1,784 from 5,218

b. 29.461 from 43.18

9. Multiply the following:

a. 6.87 x 10

b. 13.8 x 3

c. 46.2 x 8.5

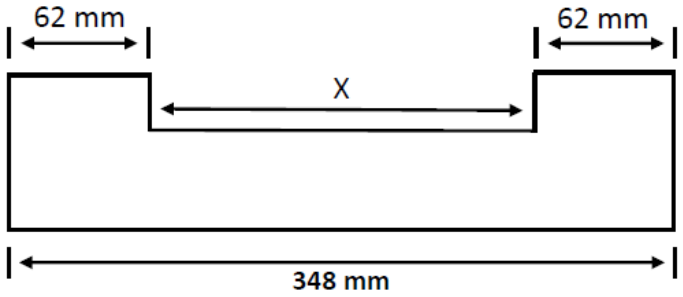
10. Divide the following:

a. 3.45 ÷ 10

b. 3024 ÷ 14

c. 56.2 ÷ 0.2

11. Find the value of x from the drawing:



Practice Aptitude Quiz

12. Which fraction is between ¼ and ¾? Select the correct response.

- ○ ½
- ○ ⅛
- ○ ⅞
- ○ 3¼

13. Evaluate the following:

a. What is 10% of $44 _____

b. What is 25% of 12.84 _____

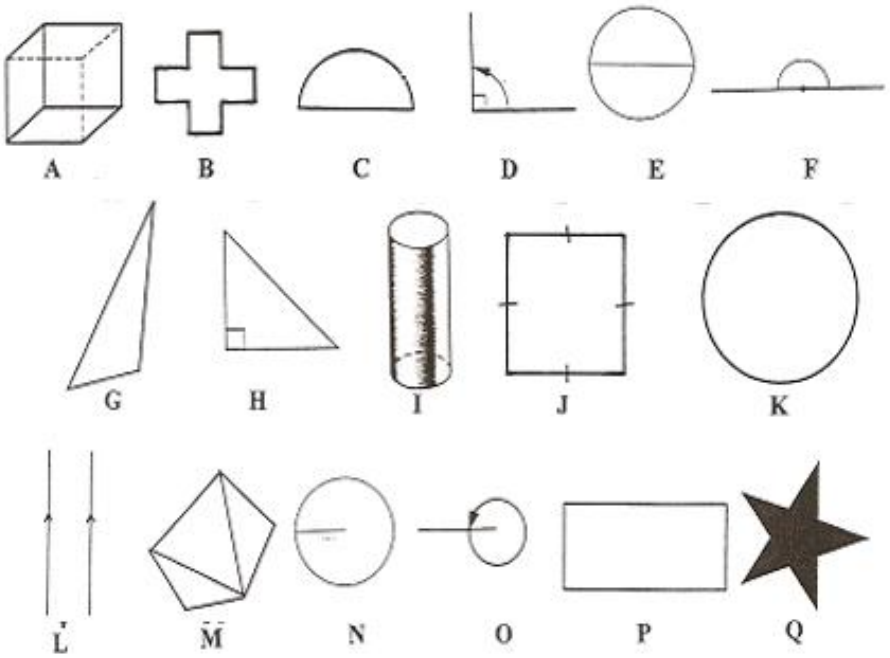
14. Which represents the best buy? Select the correct response.

- ○ 3 kg for $4.00
- ○ 15 kg for $57.00

Practice Aptitude Quiz

15. Match the shapes in the table below with their drawings. Write the corresponding letter for each shape in the table:

i. circle	
ii. triangle	
iii. rectangle	
iv. square	
v. semicircle	
vi. parallel lines	
vii. cross	
viii. star	
ix. cube	
x. cylinder	
xi. diagonal	
xii. right angle	
xiii. revolution	
xiv. right angled triangle	
xv. straight angle	
xvi. circle and diameter	
xvii. circle and radius	



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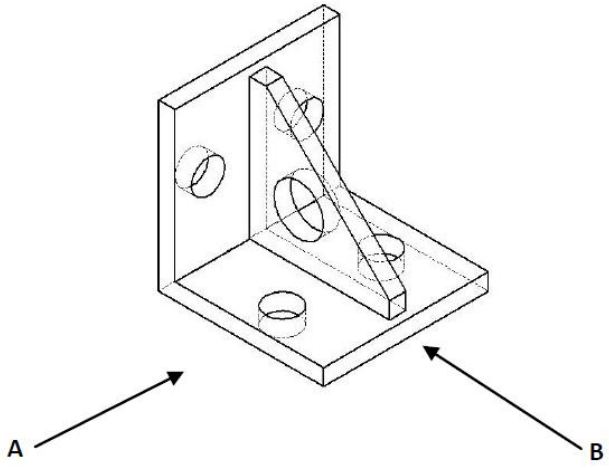
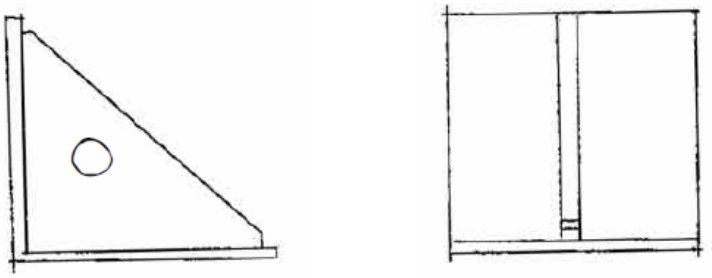
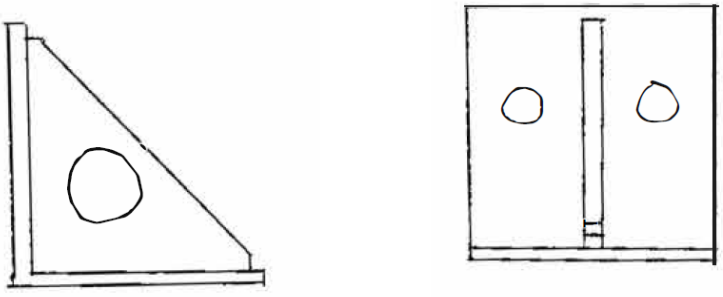
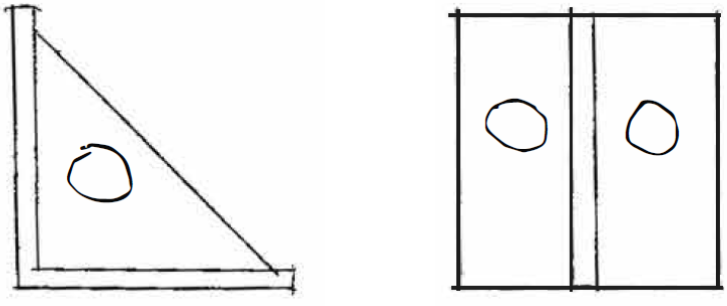


16. Select which freehand drawings best represent the view of the diagram above, if you were standing at the points A and B:

a. 

b. 

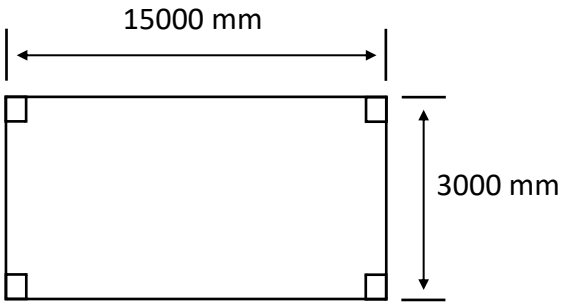
c. 

Practice Aptitude Quiz

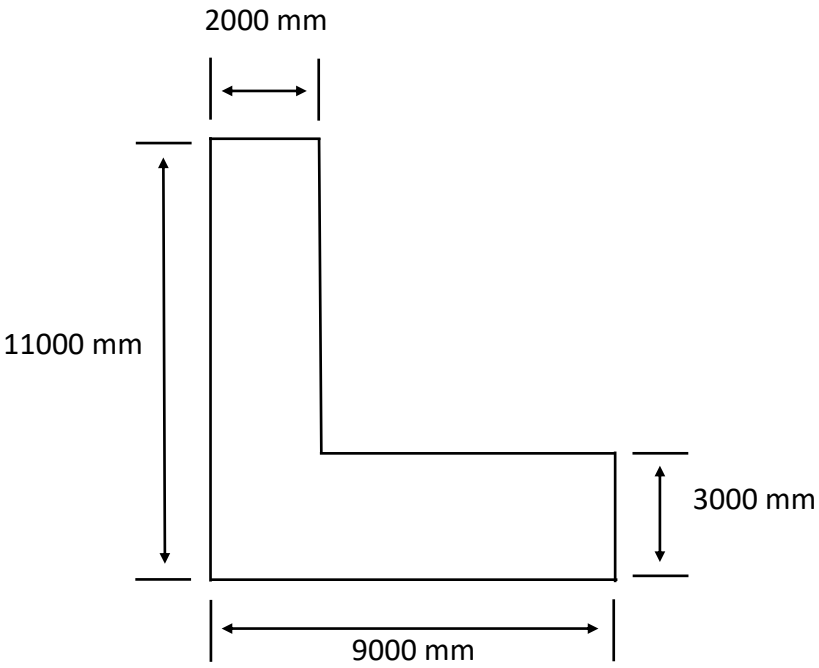
17. A tiler estimates there are 55 tiles to the square metre. How many tiles are needed for a 6 square metres wall?

18. What is the perimeter of the shape in each of these diagrams?

a.



b.



Practice Aptitude Quiz

19. If a car is traveling at 60 km per hr, how far will it travel in 3 hours?

20. Calculate the cost of 40 hinges if two cost $3.00:

21. What is the average of 12, 9 and 18?

22. Two numbers add up to 40. Find the other number if one of the numbers is 15?

23. John, a first-year apprentice earns $15.24 per hour for a 40-hour week. Find his weekly wage:

24. If one stepladder costs $98.00 how much would six stepladders cost?

25. Find the missing numbers in the following:

a.	20	25	30	35	?	
b.	10	3	11	?	12	5
c.	64	32	16	?	4	

Practice Aptitude Quiz

26. Plastic water pipe costs $19.00 for a 6-metre length. How many lengths of pipe could I buy for $171.00?

27. A lunch bill was divided equally among 6 people. The total of the bill was $48.60.

a. How much did each pay?

b. If Tuesday is half price day, how much will each pay?

28. Perry is a plumber and earns $25.00 an hour for a normal 40-hour week. For any overtime, he receives time-and-a-half. How much does he receive for working 42 hours?

29. Five litres of glue for jointing water pipe costs $65.00. How much will 1 litre cost?

30. Janni's yearly salary is $45,000.00. Calculate his:

a. Monthly wage

b. Weekly wage

31. Huynh is a Plumber's Assistant and is paid $20.00 per hour plus time and a half for any hours over 35 hours. If he worked 42 hours, what was his pay for:

a. The first 35 hours work

b. The overtime work only

c. Total pay

Practice Aptitude Quiz

32. If my car uses 18 litres of petrol every 300 kilometres, what is the rate of petrol consumption in litre per 100 km?

33. A 3,600-litre water tank is a ¼ full.

a. How much water is in the tank?

b. How much is empty space?

Practice Aptitude Quiz

ANSWERS

Section 1: Language and Literacy

1. completion, generally, results, while, length, training, components, occupations, formal, licence
2. Bathroom, Inspector, Occupation, Invoice, Sprinkler, Plumbing, Gasfitting, Draining, Copper Pipe, Solar Heating
3. The bath is less likely to be damaged.
   Additional Answer: other tradesmen do not have to worry about damaging the bath while completing their work, do not have to protect the bath while other work is being completed.
4. The plumber must ensure that the bath is secured into position, that there is adequate clearance for waterproofing to ensure a watertight installation and that the bath is level.
5. All relevant Australian Standards and approved fixing methods.
6. It is more difficult to install a bath in an existing home because pipes need to be installed behind wall cladding and the baths waterproofing and support rim must be in behind the wall cladding which may require extensive work on the wall.
   Further explanation of what these mean could be written.
7. The water supply system, the central drainage system and the fixtures and the appliances.
8. The angle is specified so that the drainage pipes allow the flow of waste water through the sewer system with the help of gravity.
9. All waste water ultimately reaches the waste stack. From there it flows to the sewer line and exits the house. Sewer gas, however, is vented through the openings in the roof of the vent.
10. Breakdowns in a household plumbing system could create an urgent problem, may cause inconvenience and have the potential to cause damage to property.
11. a. goggles, gloves, head protection
    b. goggles, gloves, hearing protection, foot protection, breathing mask
    c. goggles, gloves, foot protection

Section 2: Numeracy

1. mm, min, °C, kg, m², km/hr, ml, $
2. 25%, 16.37, 3/8, 3 ¼ , 5:4, 35°
3. a. 2634 b. 56087
4. a. 241 cents b. 26 weeks c. 10812 seconds d. 8000 m e. 3500 g
5. 11 hours and 15 minutes
6. 2 hours and 40 minutes

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7. a. $31.68 b. 804.339 c. 3.13 m or 313 cm

8. a. 3434 b. 13.719

9. a. 68.7 b. 41.4 c. 392.7

10. a. 0.345 b. 216 c. 281

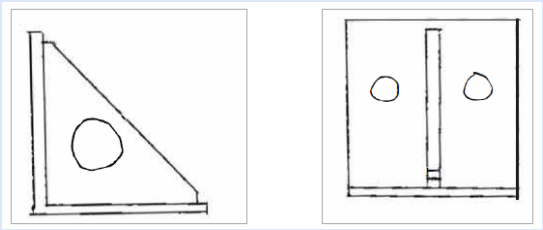
11. 224 mm

12. ½

13. a. $4.40 b. 3.21

14. 3 kg for $4.00

15. a. **i.** K **ii.** G **iii.** P **iv.** J **v.** C **vi.** L
vii. B **viii.** Q **ix.** A **x.** I **xi.** M **xii.** D
xiii. O **xiv.** H **xv.** F **xvi.** E **xvii.** N

14. b. 

17. 330 bricks

18. a. 36000 mm b. 40000 mm

19. 180 km

20. $60

21. 13

22. 25

23. $609.60

24. $588

25. a. 40 b. 4 c. 8

26. 9

27. a. $8.10 b. $4.05

28. $1075.00

29. $13

30. a. $3750 b. $865.38

31. a. $700 b. $210 c. $910

32. 6 litres per 100 km

33. a. 900 litres b. 2700 litres