

# Practice Attitude QUIZ



**Automotive Industry**

# PART 1: About this Automotive Industry Resource



## Guidance

This Practice Aptitude Quiz is intended to be a general illustration of some of the key learning standards required of people attempting an Australian Apprenticeships entry level qualification in the Automotive Industry.

**This Practice Aptitude Quiz is neither a formal tool nor a direct pre-requisite for any job application.**

This quiz has been developed with the assistance of Industry and Registered Training Organisations, based on the needs and requirements of the Industry sectors.

This Practice Aptitude Quiz focuses on literacy, numeracy, comprehension and problem solving questions contextualised to this specific industry.

The mathematics skills required to complete the questions contained within this document are equivalent to mathematics at the Year 10 level.

The quiz can be used by different organisations and people such as careers practitioners with young people, Group Training Organisations and Job Services Australia providers with job seekers.

The Practice Aptitude Quiz can be:

- Used by careers practitioners with individuals or in a class setting to provide general guidance on the level of study involved in undertaking an entry level qualification in this industry;
- Provided to people to enable them to practice their skills before sitting an actual aptitude test;
- Used by teachers as a guide to industry math requirements at the entry point of this particular Australian Apprenticeship career path;
- Used by teachers as classroom based activities for students in Years 10 to 12 and Vocational Education and Training centred studies.

The quiz should be able to be completed in approximately 1 hour and 30 minutes.

**Please note that rates quoted in this for various items, including pay rates, are not meant to reflect today's values, but are used purely for mathematical purposes.**

Calculators may be used to complete this practice exercise.

Answers are located at the end of the quiz.

## Automotive Career, Occupational Information and Job Hunting Resources

Information and links on the Automotive industry, careers, job prospects as well as career websites and job hunting resources can be found at [www.aapathways.com.au/Career-Resources](http://www.aapathways.com.au/Career-Resources).

## After the Quiz

There are a range of support services available to help you find out about courses that may help you improve your literacy and numeracy skills and also your readiness for work.

If you are still at school you should discuss any concerns you may have with your career practitioner. Further information may also be provided by a Job Services Australia provider, an Australian Apprenticeships Centre, a Group Training Organisation or a training provider.

## Useful Contacts

Here are some links to job seeker support services:

- > Search for your local Australian Apprenticeships Centre - [www.aapathways.com.au/aac](http://www.aapathways.com.au/aac)
- > Find a local Group Training Organisation - [www.grouptraining.com.au/Find/find\\_gto.html](http://www.grouptraining.com.au/Find/find_gto.html)
- > Job Services Australia providers work with eligible job seekers to develop an individually tailored Employment Pathway Plan. The plan maps out the training, work experience and additional assistance needed to find job seekers sustainable employment - [www.jobsearch.gov.au/provider/default.aspx](http://www.jobsearch.gov.au/provider/default.aspx)

## Part 2: The Quiz

### Section 1 - Literacy, Reading and Comprehension

**1. Write the following vehicle components in alphabetical order:**

Timing cover	_____
Cam shaft	_____
Rocker cover	_____
Valve	_____
Cam gear	_____
Sump	_____
Piston	_____
Alternator	_____
Bonnet	_____
Cam timing belt	_____

**2. Write the plural of the following words:**

Mechanic	_____
Woman	_____
Branch	_____
Child	_____
Sheep	_____

**3. Circle the correct spelling of each word.**

a.	dynamometer	dinamometer	dynamonitor	dinomonitor
b.	vacuum	vacoom	vakuum	vaccum
c.	differential	differencial	differentil	differenteal

**4. The following text has 10 spelling errors in it. Correct those errors and list them in the order you find them in the table on the following page.**

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

5. The following text has 5 spelling errors in it. Correct those errors and list them in the order you find them in the text.

Maintenance shedules for cars are very important. Lubrication and the replacment of worne spark plugs need regular atention.

1.
2.
3.
4.
5.

6. Read the following article and answer the questions that follow.

Cars of today rely more and more on computers, compared to the cars of the past. Technology is getting more advanced and the automobile industry has always aimed to use that to their advantage. The whole car is becoming a computer, more and more functions that used to be operated manually are now done electronically. The millions of microprocessors do a great amount of tasks. The engine and parts under the hood power the car, but it's the microprocessors that tell it what to do. You would be surprised exactly how many functions have something to do with computers.

Some of the major microprocessors are: the airbag module; Engine Control Unit (ECU) which controls the engine functions; the driver's door module; the climate control module; the cruise control module; the transmission controller which controls automatic transmission; and the ABS module which controls the anti-lock brakes and may handle the traction-control and stability-control systems.

The most important microprocessor is the ECU. It controls engine functions like the spark timing and ensuring the correct fuel to air mixture to intake into the engine block. It can also manage the emissions and the fuel economy of the car. It does so by creating the perfect ratio of fuel/air mixture.

Cars today may have as many as 100 microprocessors, many of which make them easier to service. Every engine, every vehicle and every computer system is different - but all the sensors and all the output devices must be in perfect "sync" for cars, minivans, trucks and 4WDs to run efficiently.



Some of the reasons for the increase in the number of microprocessors are:

- > The need for sophisticated engine controls to meet emissions and fuel-economy standards.
- > Advanced engine diagnostics and repair.
- > A reduction of the amount of wiring in cars.
- > New safety features.
- > New comfort and convenience features.
- > New entertainment and communication features.

## Questions:

a. Name 3 of the microprocessors commonly used in cars.

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b. What is one reason for the increase in the number of microprocessors?

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c. What is the most important microprocessor and what function does it have?

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7. Read the following passage and answer the questions which follow.

### Automotive Mechanic

The job of the Automotive Mechanic has certainly changed in the last decade with the introduction of computer technology. The automotive industry has become more sophisticated and high-tech, and so too have the skills of the Automotive Mechanic.

What sort of training do you need?

Becoming an Automotive Mechanic usually requires the completion of an Australian

Apprenticeship, which is based on a Certificate III level qualification in your desired field of Mechanical Technology.

The length of the training can vary and will involve both on-the-job and off-the-job components. The off-the-job training is provided through a training provider.

Employers generally require at least the completion of Year 11 with good results in English, Maths and Science. Many people complete Year 12 before entering an Australian Apprenticeship.

You may be able to start training for this occupation while still at school.

Automotive Mechanics may progress to positions such as a Service Manager, Workshop Foreman, Service Advisor, Technical Sales Representative, Technical Officer or Diagnostic Specialist.

What sort of things do Automotive Mechanics do?

- Discuss problems with car drivers or vehicle operators to discover faults, listen to engines, fit and operate special test and diagnostic equipment and test drive vehicles.
- Repair or replace worn and faulty parts by removing and dismantling assemblies.
- Reassemble, test, clean and adjust repaired or replaced parts or assemblies, use various tools and equipment to make sure they are working properly and put them back into the vehicle.
- Diagnose, repair and replace engine management and fuel injection components.
- Inspect vehicles and issue roadworthiness certificates or list the work required before a certificate can be issued.

You may enjoy being an Automotive Mechanic if you:

- Are interested in practical and manual work;
- Are able to work with hand tools;
- Have a technical aptitude;
- Have problem-solving skills.

## Questions:

Circle the correct response to the following five questions.

- a. **To become an Automotive Mechanic, I need to complete:**
  - i. A Bachelor in Automotive
  - ii. A Diploma in Automotive
  - iii. An Automotive Apprenticeship
  - iv. A Masters in Automotive

**b. Employers usually require you to have completed at least:**

- i. Year 10
- ii. Year 11
- iii. Year 12
- iv. Year 13

**c. Which of these skills do you believe an Automotive Mechanic needs:**

- i. Listening
- ii. Communication
- iii. Writing
- iv. Listening, Communication and Writing

**d. Automotive Mechanics:**

- i. Make inspections of vehicles
- ii. Issue roadworthiness certificates
- iii. Repair engine components
- iv. All of the above

**8. Personal Protective Equipment (PPE) includes clothing and equipment designed to be worn by a person to protect them from risks of injury or disease.**

**Below is a list of PPE commonly used in automotive workshops.**

PPE	Use in a Mechanical Workshop
Safety glasses	To protect eyes from debris when panels are sanded.
Overalls	Protects against fluids or chemicals causing damage to clothing and skin. Essential when doing spray work.
Gloves (light weight)	Protects hands from solvents and fluids.
Gloves (heavy weight)	Protects against chemicals, for example when using a parts wash.
Face shield	To protect eyes and face from flying materials created when grinding or drilling.
Steel capped boots	Protects feet/toes from injury caused by dropping heavy items.
Ear muffs or ear plugs	Used to reduce hearing damage caused by loud noises such as air rattle gun, air chisel, hammering.
Respirator	Protects lungs from inhalation of dust and fumes.
Leather apron	Protects body and clothing from burns generated from welding.
Leather gloves	Protects hands and arms from burns generated from welding.
Welding mask	Protects eyes from damage from welding.
Cap/hair net	Reduces risk of hair getting caught in rotating equipment such as drills and grinders.



# QUIZ

- a. Looking at the table on the previous page, what PPE would you use to avoid burns when undertaking a welding job?

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- b. When working with fluids or chemicals what PPE would you use?

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- c. How can you protect your feet from falling heavy objects?

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- d. To prevent dust inhalation and protect your hearing from loud noises what PPE would you wear?

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9. What personal protective equipment do you think you would need in the following situations?

- a. Grinding

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- b. Handling a car battery

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- c. Spray painting a car

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d. Panel beating

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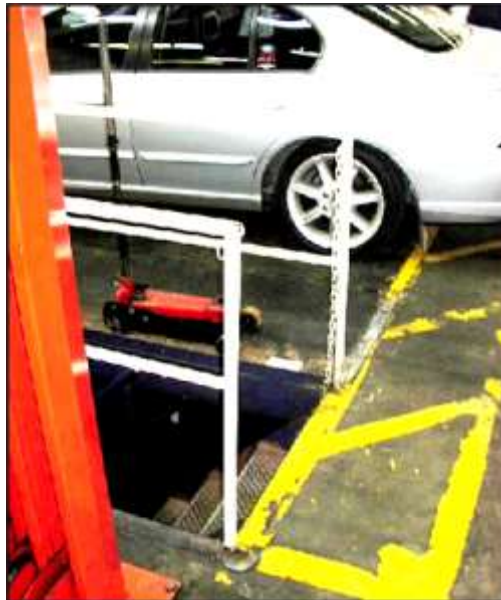
e. Sanding

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10. Below is a photo of typical automotive workshop.



a. What major hazard(s) can you see?

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b. What measures have been put in place to minimise the hazard(s)?

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## Section 2 - General Knowledge

1. The pictures below are of vehicle components. Write the name of the component (from the following list) below the correct picture.

Cylinder block, sump, spark plugs, alternator, rocker cover, piston, fuel injector, carburettor.



a. \_\_\_\_\_



b. \_\_\_\_\_



c. \_\_\_\_\_



d. \_\_\_\_\_



e. \_\_\_\_\_



f. \_\_\_\_\_



g. \_\_\_\_\_



h. \_\_\_\_\_

2. Below is a list of tools. Write the name of the tool below the correct picture.

Open ended spanner, vice grips, needle nose pliers, hacksaw, centre punch, tin snips, micro meter, Phillips head screwdriver.



a. \_\_\_\_\_



b. \_\_\_\_\_



c. \_\_\_\_\_



d. \_\_\_\_\_



e. \_\_\_\_\_



f. \_\_\_\_\_



g. \_\_\_\_\_



h. \_\_\_\_\_

# QUIZ

3. Below is a list of car body parts. Write the name of the body part below each picture.

Bumper bar, door, skirt, bonnet, boot, wing mirror, windscreen, wiper arm.



a. \_\_\_\_\_



b. \_\_\_\_\_



c. \_\_\_\_\_



d. \_\_\_\_\_



e. \_\_\_\_\_



f. \_\_\_\_\_



g. \_\_\_\_\_



h. \_\_\_\_\_

4. Which of the following words reflect electrical terms or components? Circle the correct responses.

Drive shaft	Volt
Current	Washer
Wheel cylinder	Ohms
Spring	Diode
Resistor	

## Section 3 - Mathematics

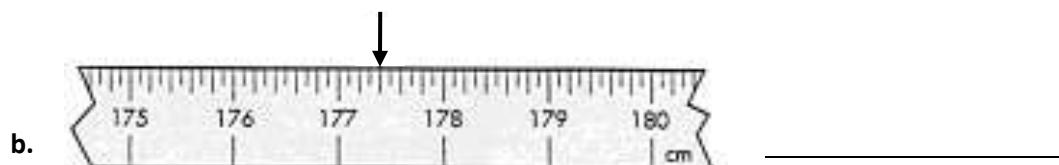
### Numbers (Measurement, Scales, Decimals, Rounding, Estimates, Scientific Notation)

1. Which unit from the table below would you use to measure:

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

kg	ml	km/hr	m <sup>2</sup>
\$	m	min	°C

2. What are the following tape readings:





3. From the list of numbers in the table below, select the one which represents a:

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

$\frac{3}{8}$	$35^\circ$	25%
5:4	16.37	$2\frac{3}{4}$

4. Convert the following:

- a. 8 kilometres to metres \_\_\_\_\_
- b. 3.5 kilograms to grams \_\_\_\_\_

5. Write the following decimal numbers, from largest to smallest:

8.23	82.3	0.823
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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. Find the decimal number halfway between:

- a. 0.6 and 0.8 \_\_\_\_\_
- b. 2.8 and 2.9 \_\_\_\_\_

7. Find the value of the following:

- a.  $2^3$  \_\_\_\_\_
- b.  $\sqrt{36}$  \_\_\_\_\_

8. Round:

- a. 35.6754 to two decimal places \_\_\_\_\_
- b. 425.8 to the nearest tens \_\_\_\_\_

9. Select the best estimate for: (Circle the correct response)

a.  $4,209 \times 63$

240,000	420,000	24,000
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b.  $60,000 \div 28$

200	2,000	20,000	4,000
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## Addition, Subtraction, Multiplication, Division

10. Add:

a. \$2, \$21.45 and \$8.23 \_\_\_\_\_

b. 18.32, 471.019 and 315 \_\_\_\_\_

11. Subtract:

a.  $5,218 - 1,784$  \_\_\_\_\_

b.  $43.18 - 29.461$  \_\_\_\_\_

12. Multiply:

a. 6.87 by 10 \_\_\_\_\_

b. 13.8 by 3 \_\_\_\_\_

c. 46.2 by 8 \_\_\_\_\_

13. Divide:

a. 3.45 by 10 \_\_\_\_\_

b. 3,024 by 4 \_\_\_\_\_

c. 56.2 by 0.2 \_\_\_\_\_

14. Circle the correct answer to  $18.642 \div 0.02$ :

a. 9.321

b. 93.21

c. 0.9321

d. 932.1

## Fractions

15. What fraction is halfway between  $\frac{1}{4}$  and  $\frac{3}{4}$ ? \_\_\_\_\_

16. Add the following:

- a.  $\frac{1}{4}$  and  $\frac{1}{2}$  \_\_\_\_\_
- b.  $\frac{2}{3}$  and  $\frac{5}{6}$  \_\_\_\_\_
- c.  $3\frac{1}{4}$  and  $\frac{1}{8}$  \_\_\_\_\_

17. Calculate:



- a.  $\frac{5}{6} - \frac{1}{4}$  \_\_\_\_\_
- b.  $\frac{21}{14} - \frac{4}{7}$  \_\_\_\_\_

18. Express as a fraction in lowest terms:

- a. 0.75 \_\_\_\_\_
- b. 2.6 \_\_\_\_\_
- c. 30% \_\_\_\_\_

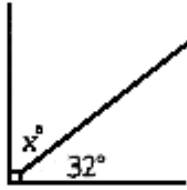
## Geometry

19. Estimate the size of the following angles by selecting the appropriate answers from the list below. Circle the correct response.

- a.  i. 30°  
ii. 80°  
iii. 120°
- b.  i. 30°  
ii. 80°  
iii. 120°

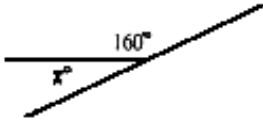
20. Find the value of  $x^\circ$  in the following diagrams:

a.



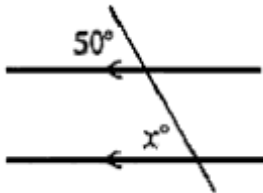
$x =$  \_\_\_\_\_

b.



$x =$  \_\_\_\_\_

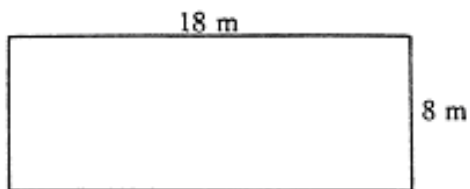
c.



$x =$  \_\_\_\_\_

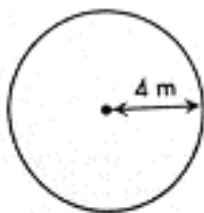
## Perimeter

21. Find the perimeter of this rectangle.



\_\_\_\_\_

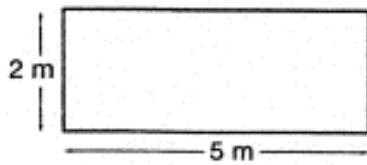
22. Find the circumference of this circle to one decimal place? (Use  $\pi = 3.14$ )



\_\_\_\_\_

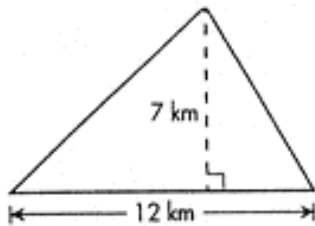
## Area

23. What is the area of the rectangle?



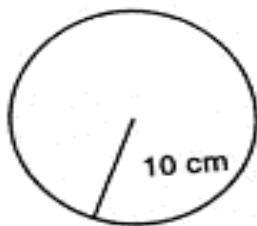
\_\_\_\_\_

24. Find the area of the triangle.



\_\_\_\_\_

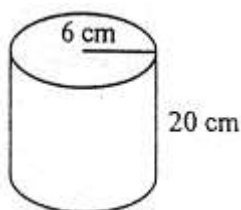
25. Find the area of this circle to one decimal place. (Use  $\pi = 3.14$ )



\_\_\_\_\_

## Volume

26. An oil can in the shape of a cylinder has a radius of 6 cm and a height of 20 cm. What is the volume of the can? (Use  $\pi = 3.14$ )



\_\_\_\_\_

## Percentages

27. Evaluate the following:

- a. 10% of \$44 \_\_\_\_\_
- b. 25% of 12.84 \_\_\_\_\_

28. Christos scored 80% in his automotive exam. There were 25 questions.

- a. How many questions did Christos get right? \_\_\_\_\_
- b. How many questions did Christos get wrong? \_\_\_\_\_

29. Michelle, a spare parts interpreter for GTA Automotive, earns \$960 a week. She gets a pay rise of 5%. What is her new weekly wage?

\_\_\_\_\_

30. A new 4 cylinder automatic car costs \$16,000. The price was reduced by 10%. Find:

- a. The amount the car was reduced by? \_\_\_\_\_
- b. The new cost of the car? \_\_\_\_\_

31. The price of one tyre is \$120. Jamie gets 10% discount for paying cash. How much did Jamie pay for four tyres with the discount?

\_\_\_\_\_

## Problem Solving

32. Three workers each produced the following number of oil filters on a particular day: 108, 143, 127. What is the total number of oil filters produced that day?

\_\_\_\_\_

33. A bolt assembly for a car's rear spring consists of a bolt of mass 8.34 g, a washer with mass 1.72 g, a lock washer with mass 0.8 g and a hexagonal nut with mass 2.3 g. What is the total weight of this bolt assembly?

\_\_\_\_\_

34. The weight of three bolts are 52 g, 49 g and 61 g. What is the average weight of the bolts?

\_\_\_\_\_



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

\_\_\_\_\_

36. After work, you and your four co-workers share a meal and split the costs evenly. If the bill totalled \$168, how much did each person have to pay?

\_\_\_\_\_

37. Peta the mechanic is paid \$22.00 per hour plus overtime at time and a half (or one and a half times the normal pay rate) for any hours over 35 hours. If she worked 42 hours, calculate:

a. The first 35 hours of work only.

\_\_\_\_\_

b. The overtime pay only.

\_\_\_\_\_

c. The total pay.

\_\_\_\_\_

38. Daniel is a mechanic and he uses feeler gauges to set or measure gaps between two components in a car, for instance when checking spark plugs, doing a valve adjustment, or setting the distributor.

He has six different size feeler gauges: 0.015 mm, 0.02mm, 0.04 mm, 0.08 mm, 0.12 mm and 0.15 mm.

What combination of gauges would he use to check the size of the following gaps?

a. 0.2 mm \_\_\_\_\_

b. 0.095 mm \_\_\_\_\_

## Formulae

39. Robert drove 300 km in 6 hours. Calculate his average speed given that speed = distance divided by time.

\_\_\_\_\_

40. If Pressure = Force/Area, find the Pressure if Force = 60 and Area = 20.

\_\_\_\_\_

41. If  $\text{Pressure} = \text{Force}/\text{Area}$ , make Force the subject of the formula.

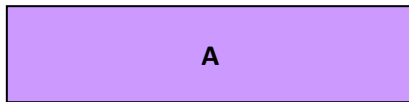
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## Ratio

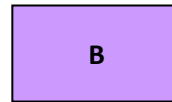
42. A 5 litre V8 vehicle uses unleaded petrol in the ratio of 3:1 when compared with a 4 cylinder 1.2 litre vehicle. If there was 24 litres of unleaded petrol in a drum to be shared between the two vehicles, how much would you pump out for the V8 vehicle to use?

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43. The length of a truck's tray top in Picture A = 5m. The length of a utility's tray in Picture B = 2m. What is the ratio of the trucks tray top to that of the utility's, in simplest terms?



5 m



2 m

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44. An angle grinder cuts through 0.5cm of steel in 1 minute. How long will it take to make a cut 3.5 cm deep?

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45. A car travels at a constant speed. If the car takes 30 minutes to travel 50 kilometres, how many kilometres will it travel in 1 hour?

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46. A car uses 12 litres of petrol per 100 kilometres. If the tank holds 60 litres, how far will it travel on a full tank?

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47. The capacity (volume) of a 6 cylinder car is 2.4 litres. What is the volume of each cylinder?

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48. A car's engine crankshaft revolves 2,400 times each minute. How many seconds does it take to revolve 1,200 times?

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49. Ali's car uses 10 litres of petrol every 300 kilometres. What is the rate of petrol consumption in km per litre for Ali's car?

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50. An air conditioning unit circulates 320 cubic metres of air per minute. How many cubic metres of air is circulated in a hour?

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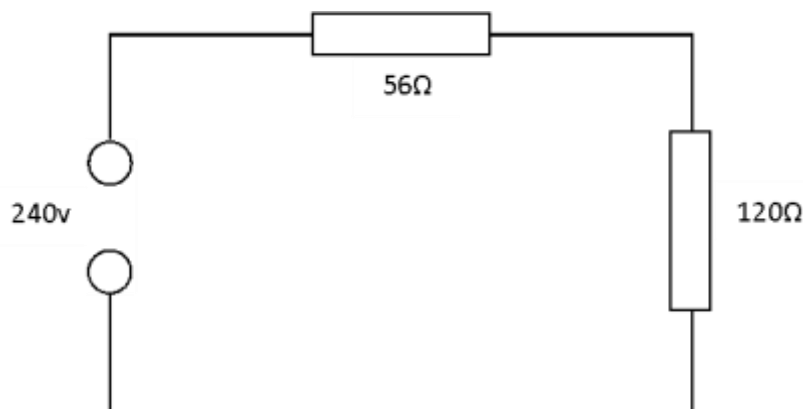
51. A mechanic cut two 14 cm long pieces of rubber tubing from a tube 50 cm long. How much of the original rubber was left?

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52. Two gears have 12 and 15 teeth respectively. What is the ratio of the number of teeth on the first gear to the number of teeth on the second gears in lowest terms?

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53. A simple series circuit has two resistors, one 56 ohms and the other is 120 ohms and is connected to a supply voltage of 240 volts. Answer the questions on the following page.



# QUIZ

**Note:**

P	=	Power
I	=	Current
R	=	Resistance
V	=	Voltage

- a. Calculate the current flowing (in amps) in the circuit using the formula  $V = IR$ . Correct to 3 decimal places.

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- b. Calculate the total power (in watts) dissipated using the formula  $P = I^2R$ . For 'I', use the answer you calculated in the previous question. Correct to 2 decimal places.

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# ANSWERS



## Section 1 - Literacy, Reading & Comprehension

1. Alternator, Bonnet, Cam gear, Cam shaft, Cam timing belt, Piston, Rocker cover, Sump, Timing cover, Valve
2. a. Mechanics      b. Women      c. Branches      d. Children      e. Sheep
3. a. dynamometer      b. vacuum      c. differential
4. files, solely, individual, whom, recipient, recipient, dissemination, communication, prohibited, unlawful
5. Maintenance, schedules, replacement, worn, attention.
6. a. The airbag module; the ECU (Engine Control Unit) which controls the engine functions, the driver's door module; climate control module; cruise control module; the transmission controller which controls automatic transmission, and the ABS module controls the anti-lock brakes and may handle the traction-control and stability-control systems.  
b.
  - The need for sophisticated engine controls to meet emissions and fuel-economy standards.
  - Advanced engine diagnostics and repair.
  - A reduction of the amount of wiring in cars.
  - New safety features.
  - New comfort and convenience features.
  - New entertainment and communication features.  
c. The micro processor that is the most important is the ECU (Engine Control Unit). It controls engine functions like the spark timing and obtaining the correct fuel to air mixture to intake into the engine block. It can also manage the emissions and the fuel economy of the car.
7. a. iii. An Automotive Apprenticeship      b. ii. Year 11  
c. iv. Listening, Communication and Writing      d. iv. All of the above
8. a. Leather apron, Leather gloves, Welding mask  
b. Overalls, Gloves  
c. Wear steel capped boots  
d. Respirator, Ear muffs or ear plugs
9. a. Face shield, Ear muffs or ear plugs, Gloves, Cap or hair net  
b. Overalls, Gloves (heavy weight)  
c. Overalls, Gloves (light weight), Respirator, Safety glasses  
d. Welding mask, Leather gloves, Leather apron, Ear muffs or ear plugs  
e. Safety glasses, Respirator
10. a. Open stairwell      b. Permanent railings, chain access, warning markers

## Section 2 - General Knowledge

1. a. sump      b. cylinder block      c. alternator      d. fuel injector  
e. piston      f. carburettor      g. rocker cover      h. spark plugs
2. a. Open ended spanner      b. Vice grips      c. Needle nose pliers  
d. Centre punch      e. Phillips head screwdriver      f. Micrometer  
g. Tin snips      h. Hacksaw

3. a. bumper bar      b. windscreen      c. boot  
 d. wing mirror      e. door      f. skirt  
 g. bonnet      h. wiper arm
4. Volt, current, ohms, diode, resistor

## Section 3 - Mathematics

1. a. m      b. min      c. °C      d. kg  
 e. m<sup>2</sup>      f. km/hr      g. ml      h. \$
2. a. 48.8 cm      b. 177.4 cm
3. a. 25%      b. 16.37      c. 3/8      d. 2¾      e. 5:4  
 f. 35°
4. a. 8000 m      b. 3500 g
5. 82.3, 8.23, 0.823
6. a. 0.7      b. 2.85
7. a. 8      b. 6
8. a. 35.68      b. 430
9. a. 240,000      b. 2,000
10. a. \$31.68      b. 804.339
11. a. 3,434      b. 13.719
12. a. 68.7      b. 41.4      c. 369.6
13. a. 0.345      b. 756      c. 281
14. d. 932.1
15.  $\frac{2}{4}$  or  $\frac{1}{2}$
16. a.  $\frac{3}{4}$       b.  $\frac{9}{6}$  or  $1\frac{1}{2}$  or  $1\frac{3}{6}$       c.  $3\frac{3}{8}$
17. a.  $\frac{7}{12}$       b.  $\frac{13}{14}$
18. a.  $\frac{3}{4}$       b.  $\frac{26}{10} = \frac{13}{5}$       c.  $\frac{30}{100} = \frac{3}{10}$
19. i. 30°      ii. 120°
20. a. 58°      b. 20°      c. 50°
21. 52 m
22. 25.12 m
23. 10 m<sup>2</sup>
24. 42 km<sup>2</sup>



# QUIZ

25.  $314 \text{ cm}^2$
26.  $2,260.8 \text{ cm}^3$
27. a. \$4.40      b. 3.21
28. a. 20      b. 5
29. \$1008.00
30. a. \$1,600      b. \$14,400
31. \$432
32. 378
33. 13.16 g
34. 54 g
35. 25
36. \$33.60
37. a. \$770      b. \$231      c. \$1001
38. a. 0.08 mm and 0.12 mm      b. 0.08 mm and 0.015 mm
39. 50 km/hr
40.  $P = 3$
41.  $F = P \times A$
42. 18 litres
43. 2.5:1
44. 7 minutes
45. 100 km
46. 500 km
47. 0.4 litres
48. 30 seconds
49. 30 km/l
50.  $19200 \text{ m}^3$
51. 22 cm
52. 4:5
53. a. 1.364 amps      b. 327.45 W

## Contributions

This Practice Aptitude Quiz would not have been possible without the support of the State Government of South Australia, Group Training Australia (SA) Inc and its members.

**This Practice Aptitude Quiz was developed by:**



**Group Training South Australia** - [www.gtasa.com.au](http://www.gtasa.com.au)

Group Training Australia (SA) (GTA SA) is a network of independent not for profit organisations located in metropolitan Adelaide and all major population centres throughout the state. These organisations operate on either an industry or regional basis and collectively they provide employment for in excess of 4,000 apprentices and trainees.

**GTA SA members are:**

AFL SportsReady - [www.aflsportsready.com.au](http://www.aflsportsready.com.au)

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Motor Trade Association Group Training Scheme - [www.mta-sa.asn.au/wcm/tec](http://www.mta-sa.asn.au/wcm/tec)

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**With specific thanks to:**



**Motor Trade Association Group Training Scheme** - [www.mta-sa.asn.au/wcm/tec](http://www.mta-sa.asn.au/wcm/tec)

The Motor Trade Association employs over 520 automotive apprentices making it Australia's largest automotive industry Group Training Scheme. MTA-GTS also operates as a registered training provider delivering Certificate I, II and III automotive training across a number of automotive trades. MTA-GTS is located at Royal Park, employing apprentices/trainees in various retail motor industry trades. MTA-GTS commenced operation in September 1982 with a group of 10 motor mechanic apprentices. Since these humble beginnings more than 2000 apprentices have graduated to full time employment as skilled, qualified tradespeople.



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**Australian Apprenticeships Pathways Website** - [www.aapathways.com.au](http://www.aapathways.com.au)

This website, part of the Australian Apprenticeships and Traineeships Information Service, provides sample Australian Apprenticeships job descriptions and links to more Australian Apprenticeships information and resources. The service is funded by the Department of Industry.



**Auto Skills Australia** - [www.autoskillsaustralia.com.au](http://www.autoskillsaustralia.com.au)

Auto Skills Australia (ASA) is the Industry Skills Council responsible for the development and maintenance of nationally accredited automotive training qualifications in Australia. Industry sectors include: Automotive Manufacturing; and Automotive Retail, Service and Repair.



**The Career Education Association of Victoria** - [www.ceav.vic.edu.au](http://www.ceav.vic.edu.au)

The CEAV is the Victorian peak body for secondary school career practitioners, work experience coordinators, VET coordinators and MIPS coordinators. The CEAV provides professional development opportunities for members and also works with business, industry, and the education and training sector.



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Industry Training Australia (ITA) delivers consultancy services to government and non-government organisations in the education and training sector. ITA develops and delivers information and communication services, including the Australian Apprenticeships Pathways website, for service provider networks and the general public.

**For enquiries about this Practice Aptitude Quiz contact the Australian Apprenticeships and Traineeships Information Service on 1800 338 022.**