

## Sample Questions



1

Calculate answers to the following questions,  
(correctly rounded to two decimal places)

a.  $20.24 + 56.719 - 0.998$

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b.  $5^2 \times 4^3 \times 0.004$

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2

express the following (a) and (b) in  
scientific notation.

a. 6968

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b. 0.000227

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3

Evaluate:

a.  $7.69392 \times 10^4$

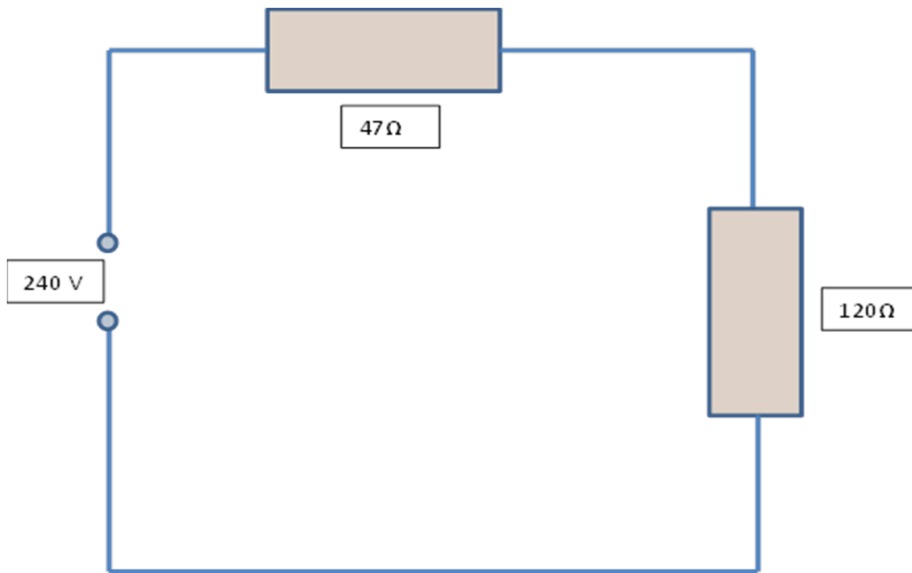
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b.  $7526 \times 10^{-3}$

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4

A circuit is supplied at 240 volts and has two resistors of 47 ohms and 120 ohms connected in series



V = Voltage in Volts

P=Power in Watts

I = Current in Amps

$\Omega$ = Resistance in Ohms

- a. Using the formula  $V = IR$   
calculate the current flowing in the circuit (in Amps)  
correctly rounded to 2 decimal places

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- b. Using the formula  $P = I^2R$   
Calculate the total power (in watts) dissipated in the circuit  
to the nearest whole number

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5

- a. How many Milliamps is 0.8Amps
- b. How many Kilowatts is 1760Watts
- c. If 1 Horsepower equals 746Watts, how many Killowats is 3 Horsepower?

6

**Determine  $29.5^2$**

(express your answer to two decimal places)

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7

**Determine:  $\sqrt{35}$**

(Give your answer correct to two decimal places)

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8

**Calculate:  $12^6 \div 12^3$**

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**Re Arrange the following Formula**

a. if  $V = I R$  then  $R =$

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b. if  $V = P/I$  then  $P =$

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9

**If an electrician drills a hole to a depth of 85mm in a 150mm thick concrete slab, how far is the drill from breaking through?**

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10

Three electricians have have quoted the following prices for the same job: \$975.00, \$1,130.00 and \$946.00. What is the average price quoted?

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11

A bundle of 25mm HD conduit consists of 10 lengths and costs \$76.60 per bundle. How much would 18 lengths cost?

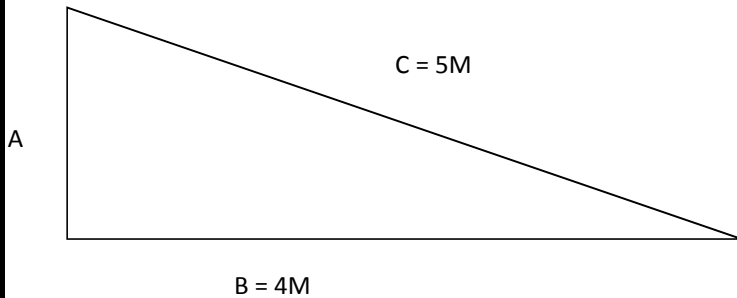
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12

Two freight trains leave Sydney at 9PM, one heads north at 35kph, the other heads south at 70kph, how far will they be appart at midnight?

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13



Using Pythagoras theorem calculate the length of side A in the right angled triangle shown above

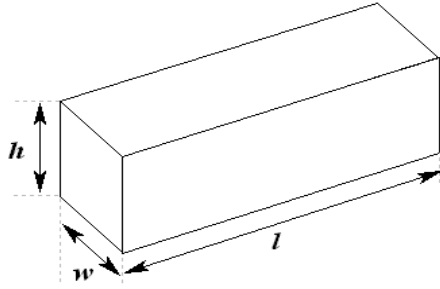
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14

A Circular area has a diameter of 20m. What is the total area of the playground? (to the nearest whole number)

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15



The formula for volume is:  
 $V = hlw$  (cubic Centimetres)  
h= height  
w= width  
l= length

If the volume is 96 cubic centimeters, length is 12 cm and width is 2 cm  
what is the height?

---

16

The cost of a repair was \$270.00 and the materials cost was 40%.  
If the remainder was labour, what did the labour cost?

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17

If a 1st year apprentice is paid \$10.42 per hour for normal time worked  
and time and a half for up to 2 hours overtime, how much will he/she  
be paid for 1.5 hours overtime?

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18

Select the number that completes the missing sequence:




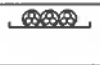

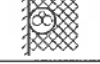





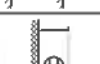

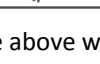
1	3	6	10	?
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19

A wholesaler provides a 15% discount on materials costing \$766.  
How much will the customer be required to pay?

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CABLE TYPES AND THEIR APPLICATION IN WIRING SYSTEMS					
	Installation method		Description	Typical cable types	
A			Unenclosed	On a surface (including cable tray or ladder)	
B					On a surface partly surrounded by thermal insulation
C				Fully surrounded by thermal insulation	
D					
E				In an enclosure	On a surface (including cable trunking)
F			Insulated and sheathed, screened or armoured, earthing conductors		
G				Insulated, unsheathed Insulated and sheathed Screened or armoured MIMS Earthing conductors	

From the Table above which installation method Shows:

- i The cable on the surface partially surrounded by Insulation \_\_\_\_\_
- ii The cable buried direct in ground \_\_\_\_\_