

## Mathematical Literacy 4 - Module 4

Name: Solutions

Marks Available: 60

Time: 45 minutes

### Question 1:

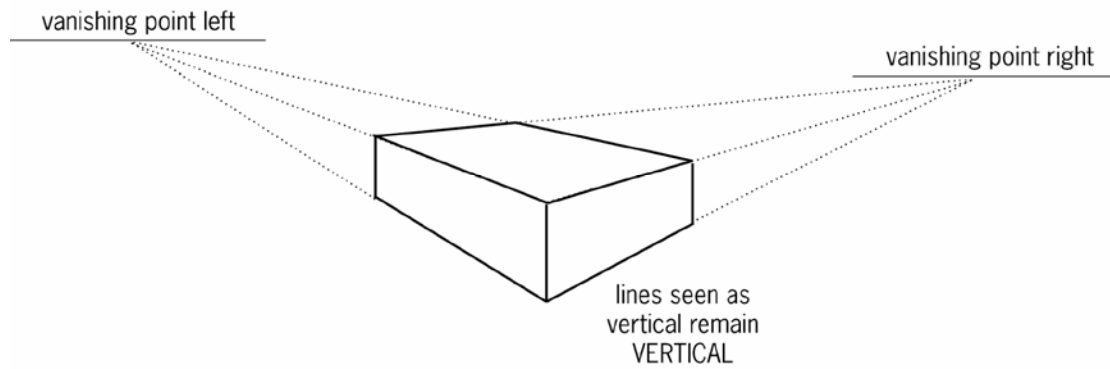
*Choose the correct answer:*

1. If an object has a mass of 12kg, it has a weight of approximately:
  - a. 12kg
  - b. 120N**
  - c. 12N
  - d. 1.2N
2.  $100\text{cm}^2$  is the same as:
  - a.  $1\text{m}^2$
  - b.  $0.1\text{m}^2$
  - c.  $0.01\text{m}^2$**
  - d.  $0.001\text{m}^2$
3. A cylinder with a radius of 5cm and a height of 10cm has a volume of:
  - a.  $3141.59\text{cm}^3$
  - b.  $785.40\text{cm}^3$**
  - c.  $34145.92\text{cm}^3$
  - d.  $1178\text{cm}^3$
4. North West on a compass is represented by:
  - a.  $45^\circ$
  - b.  $135^\circ$
  - c.  $225^\circ$
  - d.  $315^\circ$**
5. The surface area of a sphere is:
  - a. The same as the surface area of a cylinder into which it just fits**
  - b. The same as the surface area of a cube into which it just fits
  - c. the same as the surface area of the rectangle into which it just fits
  - d. the same as the surface area of the triangle into which it just fits.

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**Question 2:**

Draw a 2 point perspective drawing of a cube (you can choose your own dimensions).

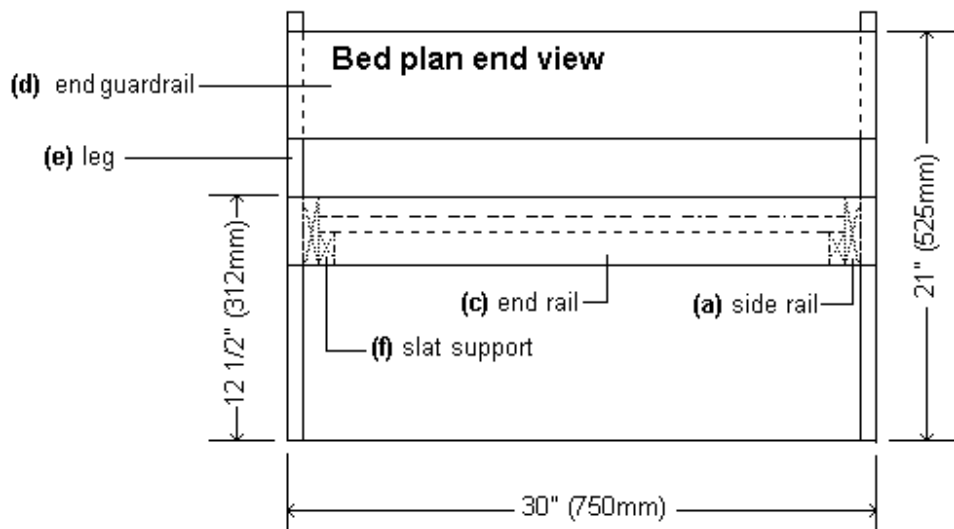
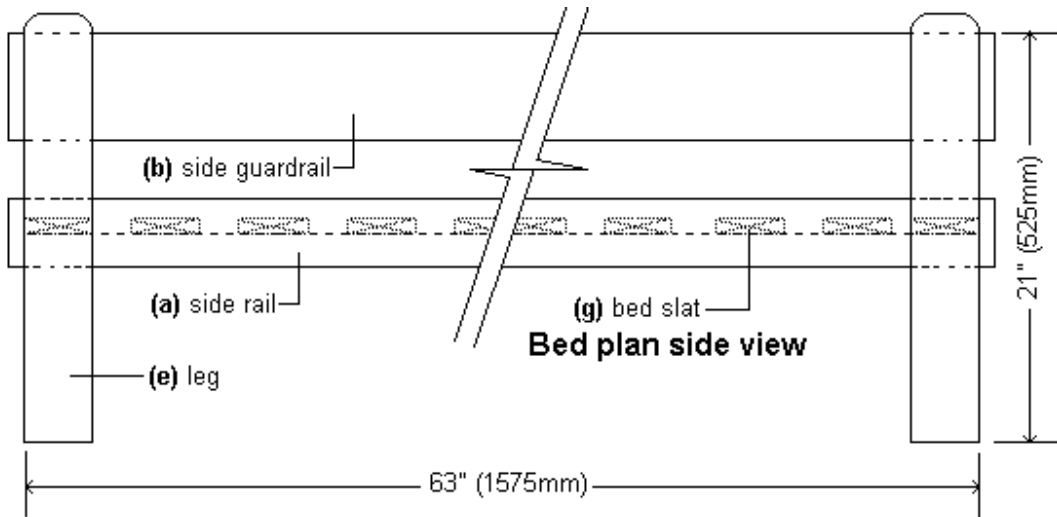


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**Question 3:**

Study the diagram for making a bed and answer the questions that follow:





ITEM	DESCRIPTION	STOCK SIZE	LENGTH	HOW MANY PIECES
[a]	side rail	3/4" x 3 1/2" (90mm x 19mm)	63" (1575mm)	2
[b]	side guardrail	3/4" x 5 1/2" (140mm x 19mm)	63" (1575mm)	1
[c]	end rail	3/4" x 3 1/2" (90mm x 19mm)	30" (750mm)	2
[d]	end guardrail	3/4" x 5 1/2" (140mm x 19mm)	30" (750mm)	2
[e]	leg	3/4" x 3 1/2" (90mm x 19mm)	22" (550mm)	4
[f]	bed slat support	3/4" x 1 1/2" (40mm x 19mm)	63" (1575mm)	2
[g]	bed slat	3/4" x 3 1/2" (90mm x 19mm)	27" (675mm)	12

1. Draw up an order for the amount of wood you will need, assuming that it comes in boards of 2m long. (10)

Total wood needed (90mm x 19mm) =

- 2 x 1575 mm = 3150mm
- 2 x 750 mm = 1500mm
- 4 x 550mm = 2200mm
- 12 x 675mm = 8100m
- Total = 14 950mm = Approx 15 metres

Total wood needed (140 x 19mm)

- 1 x 1575mm
- 2 x 750mm
- Total = 3075mm = Approx 3.1m

Total wood needed (40 x 19mm)

- 2 x 1575 = 3150mm
- Total = Approx 3.2m

2. What would be the dimensions of the mattress to fit the bed? (4)  
**1575 x 675 mm**

3. What is the area of the mattress? (4)  
**1.06 m<sup>2</sup>**

4. Wood is priced by the following formula:

Length x width x thickness x price x VAT

Assuming the price per cubic metre of wood to be R5000, what would you expect to pay for the wood? (8)

**For 90 x 19mm: (15)(0.9)(0.019)(5000)(1.14) = R1462.05**

**For 140 x 19mm: (3.1)(0.14)(0.019)(5000)(1.14) = R47**

**For 40 x 19mm: (3.2)(0.04)(0.019)(5000)(1.14) = R13.86**

**Total price = R1522.91**

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#### **Question 4:**

*Study the route map and answer the questions that follow:*

1. How far is it from Cape Town to Bloemfontein? (2)

**1004km**

2. Assuming that you get 400km from a tank of petrol, where might you plan to stop for petrol? (4)

**Laingsburg / Prince Albert Road; Three Sisters; Colesberg**

3. If you drive at an average of 100km/h and stop for two hours for petrol and meals, how long will the trip take you? (4)

**Trip time = Approx 10 hours + 2 hours = 12 hours**

4. Assuming that petrol costs R6,92 / litre and you get 8l/100km, how much is the trip likely to cost you? (4)

**Fuel usage = 1000km / 100km x 8l = 80 litres**

**80 litres x R6.92 = R553.60**

[14]

# BLOEMFONTEIN TO CAPE TOWN

