Year 7 Mathematics

End Term 1

45 marks

40 mins

Date

Instructions: 1. Answer all questions 2. Calculators permitted

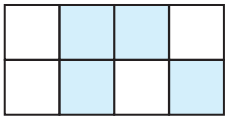
Question 1 (10 marks - 1 mark each)

a) Write the four-fifths as a fraction.

b) Write the following $6\frac{3}{4}$ as words:

c) What fraction is the shaded part of the whole:

i)



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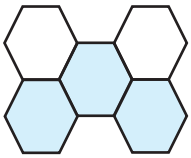


d) **i)** What fraction is 25c of $1?

ii) What fraction is 75c of $1?

e) Change $2\frac{3}{4}$ to an improper fraction:

f) Change $\frac{13}{5}$ to a mixed number:

g) Calculate each of the following:

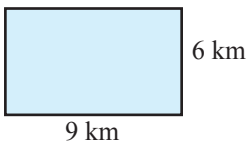
i) $\frac{3}{4}$ of 12

ii) 25% of 20

Question 2 (10 marks)

a) Calculate the area of each of the following shapes:

i)



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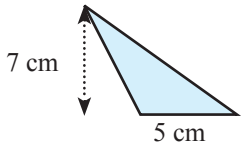

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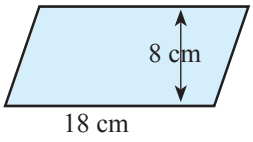

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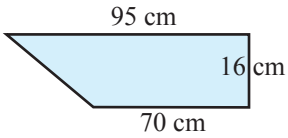
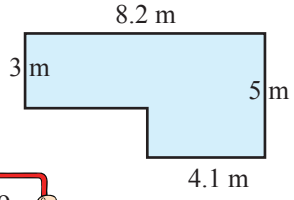


(1 each)

b) What is the area of a bedroom wall that is 3.4 m wide by 2.4 m high? Roughly how much paint is needed for two coatings of the wall (A litre of paint will cover 15 m^2 on average)? (2)

c) A rectangular paddock is 850 m by 420 m.
What is the area of the paddock in hectares (1 hectare = 10 000m^2)? (2)

d) A company has an offer to supply and install carpet at $107.50 per square metre.
How much will it cost to carpet the lounge?



(2)

Question 3 (14 marks - 1 each)

a) When tossing a coin the theoretical probabilities are:
Probability of Head = ½ =0.5 Probability of Tail = ½ = 0.5

i) If a coin is tossed 80 times, how many heads would be expected?

ii) If a coin is tossed 80 times, how many tails would be expected?

iii) If a coin is tossed 800 times, how many heads would be expected?

b) A six-sided die is thrown. What is the probability of each of the following?

i) 1 **ii)** odd **iii)** >4 **iv)** <1

c) A class raffle is conducted by writing the numbers from 1 to 25 on a piece of paper and placed in a bag. What is the probability that the drawn number is:

i) 15? **ii)** even? **iii)** divisible by 5? **iv)** a square (eg 1, 4, 9)?

d) A lottery is conducted by printing and selling tickets with the numbers from 1 to 100 000.

i) What is the probability that the drawn number is 43 546?

ii) If you purchase one ticket, what is your chance of winning?

iii) If you purchase 10 tickets, what is your chance of winning?

Question 4 (11 marks - 1 each))

a) Add GST (10%) to the price of each of the following items:

i) A hamburger @ $7 **ii)** A shirt @ $19.00

b) A discount of 20% is offered on each of the following items. Find the discount, and the new price:

i) A pen @ $4 **ii)** A saxophone @ $980

c) If the price of unleaded petrol is $2.14 per litre, what is the cost of 65 L of petrol?

d) Find the rate for 100 of each of the following:

i) $45 for 300 g **ii)** $5.48 for 800 g

iii) $8.12 for 700 mL **iv)** $6.20 for 500 mins

e) Which is the best buy?

i) $6.40 for 500 mL of soy sauce or $9.80 for 800 mL?

ii) $2.48 for 400 g of milk powder or $3.84 for 600 g?

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Year 7 Mathematics

End Term 1

45 marks

40 mins

Date

Instructions: 1. Answer all questions 2. Calculators permitted

Question 1 (10 marks - 1 mark each)

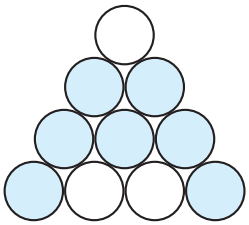
a) Write the three-quarters as a fraction.

b) Write the following $3\frac{1}{2}$ as words:

c) What fraction is the shaded part of the whole:

i)

ii)



d) **i)** What fraction is 50c of $1?

ii) What fraction is 25c of $1?

e) Change $2\frac{3}{5}$ to an improper fraction:

f) Change $\frac{11}{3}$ to a mixed number:

g) Calculate each of the following:

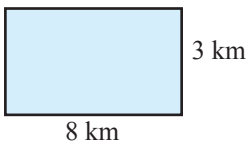
i) $\frac{2}{3}$ of 12

ii) 25% of 40

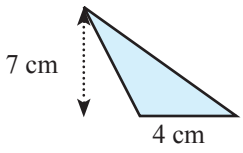
Question 2 (10 marks)

a) Calculate the area of each of the following shapes:

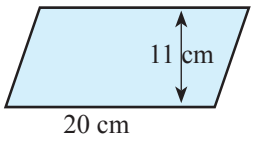
i)



ii)



iii)



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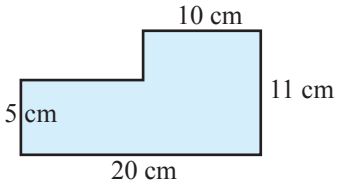
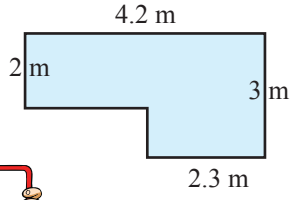


(1 each)

b) What is the area of a bedroom wall that is 3.2 m wide by 2.3 m high? Roughly how much paint is needed for two coatings of the wall (A litre of paint will cover 15 m^2 on average)? (2)

c) A rectangular paddock is 450 m by 120 m.
What is the area of the paddock in hectares (1 hectare = 10 000m^2)? (2)

d) A company has an offer to supply and install carpet at $92.90 per square metre.
How much will it cost to carpet the lounge?



(2)

Question 3 (14 marks - 1 each)

a) When tossing a coin the theoretical probabilities are:
Probability of Head = ½ =0.5 Probability of Tail = ½ = 0.5

i) If a coin is tossed 70 times, how many heads would be expected?

ii) If a coin is tossed 70 times, how many tails would be expected?

iii) If a coin is tossed 700 times, how many heads would be expected?

b) A six-sided die is thrown. What is the probability of each of the following?

i) 2 **ii)** even **iii)** <4 **iv)** >6

c) A class raffle is conducted by writing the numbers from 1 to 20 on a piece of paper and placed in a bag. What is the probability that the drawn number is:

i) 10? **ii)** odd? **iii)** divisible by 3? **iv)** a cube (eg 1, 9,)?

d) A lottery is conducted by printing and selling tickets with the numbers from 1 to 100 000.

i) What is the probability that the drawn number is 83 546?

ii) If you purchase one ticket, what is your chance of winning?

iii) If you purchase 10 tickets, what is your chance of winning?

Question 4 (11 marks - 1 each))

a) Add GST (10%) to the price of each of the following items:

i) A drink @ $2 **ii)** A ticket @ $130.00

b) A discount of 20% is offered on each of the following items.
Find the discount, and the new price:

i) A speaker @ $42 **ii)** A bicycle @ $320

c) If the price of unleaded petrol is $1.84 per litre, what is the cost of 57 L of petrol?

d) Which is the best buy?

i) $4.60 for 2 kg of potatoes or $10.00 for 5 kg?

ii) $64.75 for 5 m of fibre or $111.15 for 9 m?

e) Find the rate for 100 of each of the following:

i) $36 for 300 g **ii)** $5.28 for 800 g

iii) $8.12 for 700 mL **iv)** $6.20 for 500 mins

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