

1. On a farm there are 350 cows. Each day 11,300 litres of milk are produced. How many of litres of milk does each cow produce? Round your answer to the nearest whole number.

A calculator may be used.

2. However, due to pregnancies (having calves) only 290 cows are milked at any one time. Using your answer from question 1, what is the total litres of milk produced from the milking cows each day?

3. A farmer takes 6 Highland cows to a show. The entry fee is £3 per cow. One cow wins bronze, two cows win silver and three cows win gold. Calculate the farmers profits.

Gold prize = £10
Silver prize = £5
Bronze prize = £2



4. A 16kg bag of cow feed is made up of: $\frac{2}{8}$ Wheat, $\frac{3}{8}$ Maize, $\frac{1}{8}$ Barley, $\frac{2}{8}$ Oats

a) If you are making up a bag of cow feed how many kilograms do you need of:

- i) Wheat
- ii) Maize
- iii) Barley

b) If each cow requires 4kg of feed per day then how many days will one bag of feed last per cow?

5. The cows need to be milked three times a day.

The first session starts at 03:00am and finishes at 05:30am. The second session starts at 12:30pm and finishes at 14:15pm. The last session starts at 19:45 and finishes at 21:00.

How long does the farmer spend milking the cows that day?

6. In a farm there are 200 Highland cows. There are 140 brown coloured cows, 25 black coloured cows, 20 red coloured cows and 15 white coloured cows.

- a) Express in a ratio the number of brown coloured cows to red coloured cows. Simplify your answer.
- b) Express in a ratio the number of black coloured cows to white coloured cows

7. A farmer grows tomatoes on his farm and is trying to keep costs low.

Which shop is the cheapest for the farmer to buy 40 tomato seeds?

Anderson's = £1.80 for 20 seeds

Marshall's = £0.80 for 10 seeds

Country Corner = £0.50 for five seeds

8. In Farmer Watsons farm he has a vegetable patch where he grows different vegetables for the public to buy.

His vegetable patch is composed of 40% potatoes, 25% leeks, 30% strawberries and 5% carrots.

Express each percentage of vegetables in its simplest form.



ANSWERS

1. 32 litres per cow
2. $290 \times 32 = 9280$ litres of milk
3. $6 \times \text{£}3 = \text{£}18$ entry
 $\text{£}2 \times 1 = \text{£}2$ $\text{£}5 \times 2 = \text{£}10$ $\text{£}10 \times 3 = \text{£}30$
 $\text{£}2 + \text{£}10 + \text{£}30 = \text{£}42$
 $\text{£}42 - \text{£}18 = \text{£}24$ profit
4. i) $\frac{2}{8}$ of 16kg ii) $\frac{3}{8}$ of 16kg iii) $\frac{1}{8}$ of 16kg
 $16 \div 8 = 2\text{kg}$ $16 \div 8 = 2\text{kg}$ $16 \div 8 = 2\text{kg}$
 $2\text{kg} \times 2 = 4\text{kg}$ $2\text{kg} \times 3 = 6\text{kg}$ $2\text{kg} \times 1 = 2\text{kg}$
 b) 1 day = 4kg
 $16 \div 4 = 4$ days
5. 03.00am - 05.30 = 2.5 hours
 12.30 - 14.15 = 1.45 hours
 19.45 - 21.00 = 1.15 hours
 = $5\frac{1}{2}$ hours
6. a) 140:20 14:2 7:1
 b) 25:15 5:3
7. Anderson's - 40 20 = 2 packets $2 \times \text{£}1.80 = \text{£}3.60$
 Marshall's - 40 10 = 4 packets $4 \times \text{£}0.80 = \text{£}3.20$
 Country Corner - 40 5 = 8 packets $8 \times 0.5 = \text{£}4$
Marshall's is the cheapest place for the farmer to buy his tomato seeds
8. Potato = 40% = $\frac{4}{10} = \frac{2}{5}$
 Leek = 30% = $\frac{30}{100} = \frac{3}{10}$
 Strawberries = 25% = $\frac{25}{100} = \frac{1}{4}$
 Carrots = 5% = $\frac{5}{100} = \frac{1}{20}$



FOR TEACHERS

Curriculum for Excellence Links

1. I can use my knowledge of rounding to routinely estimate the answer to a problem then, after calculating, decide if my answer is reasonable, sharing my solution with others.

MNU 2-01a

2. Having explored the patterns and relationships in multiplication and division, I can investigate and identify the multiples and factors of numbers.

MTH 2-05a

3. I can use the terms profit and loss in buying and selling activities and can make simple calculations for this.

MNU 2-09c

4. I have investigated the everyday contexts in which simple fractions, percentages or decimal fractions are used and can carry out the necessary calculations to solve related problems.

MNU 2-07a

5. I can use and interpret electronic and paper-based timetables and schedules to plan events and activities and make time calculations as part of my planning.

MNU 2-10a

6. Having explored the patterns and relationships in multiplication and division, I can investigate and identify the multiples and factors of numbers.

MTH 2-05a

7. I can manage money, compare costs from different retailers, and determine what I can afford to buy.

MNU 2-09a

8. I have investigated the everyday contexts in which simple fractions, percentages or decimal fractions are used and can carry out the necessary calculations to solve related problems.

MNU 2-07a