Name: Date:

Christmas Maths

1. Father Christmas has to travel all the way round the world.
   This is a distance of 24,900 miles. **Write this number as words.**

2. He has 207 elves working for him all year round. At Christmas he employs 156 more. **How many elves does he have in total?**

3. 57 elves get swine flu. **How many are left to deal with the Christmas rush?**

4. **Round the number of elves left to the nearest 100.**

5. There are 12 reindeers. **Round this to the nearest 10.**

6. **Estimate how many working staff Father Christmas has. (Elves and reindeers)**

7. **Calculate how many staff Father Christmas has. (Elves and reindeers)**

8. 2 elves have to pack 48 candy canes. **How many candy canes does each elf pack?**

9. 5 elves have to pack 60 X-boxes. **How many X-boxes does each elf pack?**

10. 3 elves pack 87 bars of soap. **How many bars does each elf pack?**

Name: Date:

Christmas Maths

11. 5 elves have to pack 350 dolls. **How many dolls does each elf pack?**

12. 6 elves have to pack 726 toy cars. **How many cars does each elf pack?**

13. An elf is checking his overtime wages. He gets £5.80 per hour plus 45p overtime and 6p bonus per hour. **How much is this in total per hour?**

14. Round the hourly overtime rate to the nearest pound.

15. The same elf turns up 1/4 hour late for overtime. Father Christmas cuts his wages by £1.20. **How much has he earned in this hour?**

16. Round this amount to the nearest pound.

17. One of the elves is a supervisor. He gets £6.20 per hour, plus 62p overtime and 12p bonus. **How much is this in total?**

18. Another elf earns £7.45 per hour. He works 5 hours a day. **How much is that per day?**

19. Round this to the nearest pound.

20. Christmas Day is on 25/12/09. **Write this date in words.**

Name: Date:

Christmas Maths

21. New Year's Day is on the first of January 2010. **Write this date in numbers.**

22. Julie has bought a Christmas pizza. She eats 6/8 of it. **Shade in 6/8**
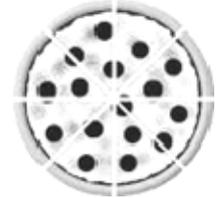
23. 6/8 is the same as 3/4. **True or false?**

24. Little Billy eats 8/10 of his giant Dairy Milk. **Shade in 8/10.**
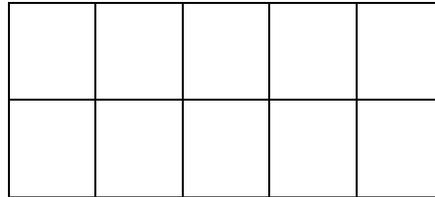
25. 8/10 is the same as 4/5. **True or false?**

26. Auntie Mabel drinks ½ a bottle of sherry before Christmas dinner.

Circle the fractions that are equivalent to 1/2

2/4   7/12   3/6   1/6   6/12   2/3   3/4   5/10   6/16   4/8   2/6
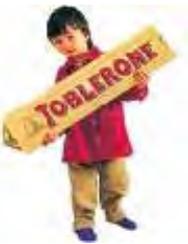
27. Now little Billy has eaten ¾ of a giant Toblerone. **¾ is the same as**

6/16   2/8   4/12   5/20   3/12   12/16   4/16   9/12   15/20   6/8   10/15

28. Bob gets a new tape measure for Christmas. It's in centimetres and millimetres.

How many millimetres are there in 1 centimetre?

29. How many millimetres in 2.5 centimetres?

30. The tape is 3 metres long. **How many centimetres is that?**

Name: Date:

Christmas Maths

31. This is Jim's present: The height is 10cm, the width is 25cm and the depth is 15cm.

Mark these on the picture.

32. There are 2 spaces under the Christmas tree.

   a) H 12cm, W 23cm, D 15cm.

   b) H 12cm, W 27cm, D 16cm.

Will Jim's present fit into either of these spaces?

33. These are the presents received by a class of students:

> chocolates socks toiletries diary toiletries socks chocolates socks diary socks
> toiletries socks chocolates diary chocolates socks socks diary socks
> chocolates socks toiletries diary chocolates socks toiletries diary diary
> toiletries chocolates chocolates socks diary diary socks socks chocolates

Record the numbers of presents in this tally chart.

Gifts	Tally	Total
Chocolates		
Socks (pairs)		
Toiletries		
Diary		

34. What was the most popular present?

35. Calculate the total number of _individual_ socks given as presents.

Name: Date:

Christmas Maths

36. A garden centre keeps a record of how many Christmas trees they sell each day.

Each Christmas tree 🎄 = 15 Christmas trees sold.

10th December	🎄 🎄 🎄
11th December	🎄 🎄 🎄 🎄 🎄
12th December	🎄 🎄 🎄 🎄
13th December	🎄 🎄 🎄 🎄 🎄 🎄 🎄

How many trees were sold on 10th December?

37. How many more trees were sold on 13th December than 12th December?

38. My true love sent to me:

12 drummers drumming,
11 pipers piping,
10 lords a leaping,
9 ladies dancing,
8 maids a milking,
7 swans a swimming,
6 geese a laying,
5 gold rings,
4 calling birds,
3 French hens,
2 turtle doves,
1 partridge in a pear tree.

How many presents should I get altogether?

39. The 9 ladies dancing got lost in the post. **How many presents did I actually receive?**

40. What is the mean number of gifts I received per day?

Name: Date:

Christmas Maths

41. These are the numbers of presents that members of a numeracy class got:

John: 5	Patrick: 1	Greg: 9	Mark: 2	Sarah: 6
Paula: 3	Collette: 4	Kim: 5	Lee: 0	June: 5

Work out the mean, mode and median number of presents.

42. What is the range of presents?

43. What percentage of the total number of presents did Collette receive?

44. What percentage of the total number of presents did Sarah receive?

45. What percentage of the total number of presents did John receive?

Well done!

Enjoy the Christmas break.

Answer

Page 1

1. Father Christmas has to travel all the way round the world. This is a distance of 24,900 miles. Write this number as words. **Twenty four thousand, nine hundred miles**.

2. He has 207 elves working for him all year round. At Christmas he employs 156 more. How many elves does he have in total? **207 + 156 = 363 elves**

3. 57 elves get swine flu. How many are left? **363 – 57 = 306**

4. Round this number to the nearest 100 elves. **300**

5. There are 12 reindeers. Round this to the nearest 10. **10**

6. Estimate how many working staff Father Christmas has. **300 + 10 = 310**

7. Calculate how many staff Father Christmas has. (Elves and reindeers) **306 + 12 = 318**

8. 2 elves have to pack 48 candy canes. How many does each elf pack? **48 ÷ 2 = 24 candies**

9. 5 elves have to pack 60 X-boxes. How many do they each pack? **60 ÷ 5 = 12 X-boxes**

10. 3 elves pack 87 bars of soap. How many do they each pack? **87 ÷ 3 = 29 bars soap**

Page 2

11. 5 elves have to pack 350 dolls How many do they each pack? **350 ÷ 5 = 70 dolls**

12. 6 elves have to pack 726 toy cars. How many do they each pack?

13. An elf is checking his overtime wages. He gets £5.80 per hour plus 45p overtime and 6p bonus per hour. How much is this in total per hour? **£5.80 + £0.45 + £0.06 = £6.31**

14. Round the hourly overtime rate to the nearest pound. **£6.00 per hour**

15. The same elf turns up 1/4 hour late for overtime. Father Christmas cuts his wages by £1.20. How much has he earned in this hour? **£6.31 - £1.20 = £5.11**

16. Round this amount to the nearest pound. **£5.00**

17. One of the elves is a supervisor. He gets £6.20 per hour, plus 62p overtime and 12p bonus. How much is this in total? **£6.00 + £0.62 + £0.12 = £6.74**

18. Another elf earns £7.45 per hour. He works 5 hours a day. **£7.45 x 5 = £37.25 per day**

19. Round this to the nearest pound. **£37**

20. Christmas Day is on 25/12/09. **Twenty fifth of December, two thousand and nine.**

Page 3

21. New Year's Day is on the first of January 2010. Write this date in numbers.

22. Julie has bought a Christmas pizza. She eats 6/8 of it. Shade in 6/8 **6 slices to be shaded**

23. 6/8 is the same as ¾. **True** or false?

24. Little Billy eats 8/10 of his giant Dairy Milk. Shade in 8/10.

25. 8/10 is the same as 4/5. **True** or false?

26. Auntie Mabel drinks ½ a bottle of sherry before Christmas dinner. Which of these fractions are equivalent to ½? **2/4**
    7/12 **3/6** 1/6 **6/12** 2/3 ¾ **5/10** 6/16 **4/8** 2/6

27. Now Little Billy has eaten ¾ of a giant Toblerone. ¾ is the same as:
    6/16 2/8 4/12 5/20 3/12 **12/16** 4/16 **9/12 15/20 6/8** 10/15

28. Bob gets a new tape measure for Christmas. How many millimetres are there in 1 centimetre? **10**

29. How many millimetres in 2.5 centimetres? **25**

30. The tape is 3 metres long. How many centimetres is that? **300**

Kindly contributed by Carrie Bray, Northampton College.
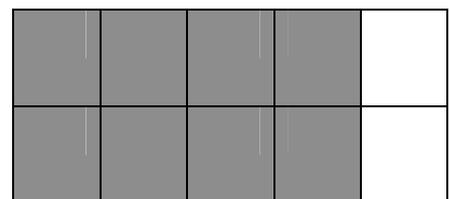
Answer

Page 4

31. This is Jim's present: The height is 10cm, the width is 25cm and the depth is 15cm.

    Mark these on the picture. **To be labelled correctly – check with your tutor if needed.**

32. There are 2 spaces under the Christmas tree.

    a) H 12cm, W 23cm, D 15cm

    b) H 12cm, W 27cm, D 16cm.

Will Jim's present fit into either of these spaces? Yes – space b

33. These are the presents received by a class of students:

Record the numbers of presents in this tally chart.

Gifts	Tally	Total
Chocolates	|||| ||||	9
Socks (pairs)	|||| |||| ||||	14
Toiletries	||||		6
Diary	|||| |||	8

34. What was the most popular present? Socks

35. Calculate the total number of <u>individual</u> socks given as presents 14 x2 = 28 socks

10th December 3 x15 = 45 trees
11th December 5 x 15 = 75 trees
12th December 4 x 15 = 60 trees
13th December 7 x 15 = 105 trees

Page 5

36. How many trees were sold on 10th December? **45**

37. How many more trees were sold on 13th December than 12th December? **105-60=45**

38. How many presents should I get altogether?

    1+2+3+4+5+6+7+8+9+10+11+12=78

39. The 9 ladies dancing got lost in the post. How many did I actually receive? **78-9=69**

40. What is the mean number of gifts I received per day? **69÷12=5.75**

Page 6

41. This is how many presents the members of a numeracy class got:

John: 5	Patrick: 1	Greg: 9	Mark: 2	Sarah: 6
Paula: 3	Collette: 4	Kim: 5	Lee: 0	June: 5

Work out the mean, mode and median number of presents.

Total no. presents = 40. Mean = 40÷10 = 4. Mode = 5 (most common no. of

presents). Median = 4.5 (0 1 2 3 4 ⬇5 5 5 6 9)

42. What is the range of presents? **9-0=9**

43. What percentage of the total number of presents did Collette receive? **4/40x100=10%**

44. What percentage of the total number of presents did Sarah receive? **6/40x100=15%**

45. What percentage of the total number of presents did John receive? **5/40x100=12.5%**