

## Prime Numbers and Divisibility

1. Write down all the factors of 24.
2. Write down all the factors of 30.
3. Write down the common factors of 24 and 30.
4. Write down which of these numbers are factors of 48: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
  
5. A bus can hold 76 people. The bus travels to Bradford 7 times in a day. How many people can it carry to Bradford altogether?
6. A restaurant has 48 seats. There are 8 sittings per day. How many people can the restaurant serve in: a) one day? b) three days?
7. A theatre holds 450 people. In one week, the theatre puts on 12 performances. Each performance is sold out. How many people go and see the show?
  
8. a) Work out  $7 + 9 \times 3 =$   
b) Work out  $8 + 2 \times 5 =$   
c) Work out  $11 + 4 \times 7 =$
  
9. There are 6 cakes in a pack. Fred needs 50 cakes. How many packs does he need to buy?
10. Four people plus the driver can fit in John's car. John needs to transport 37 people altogether. How many trips does John need to make?
11. A bucket holds two gallons of water. There are eight pints in a gallon. How many buckets will be needed to carry 45 pints of water?
  
12. a) What are the prime numbers less than 20?  
b) Add together all the prime numbers less than 20.  
c) List the prime numbers between 8 and 18.  
d) List the prime numbers between 20 and 30.
  
13. Look at these numbers: 3829, 3386, 2910, 3728, 88931, 38271  
FROM THE LIST, choose the multiples of:  
a) 2  
b) 9  
c) 5  
d) 10  
e) 3

PLEASE NOTE THAT THERE IS MORE THAN ONE ANSWER FOR EACH QUESTION.

14. Look at these numbers: 382735, 3829, 38272, 91912, 18396, 3885, 281730

FROM THE LIST, choose the multiples of:

- a) 2
- b) 9
- c) 5
- d) 10
- e) 3

PLEASE NOTE THAT THERE IS MORE THAN ONE ANSWER FOR EACH QUESTION.

15. Fred said that  $48 \times 16$  is 720. He explained how he worked it out:

$$48 \times 10 = 480$$

$$40 \times 6 = 240$$

$$480 + 240 = 720.$$

- a) Write a sentence or two, explaining what Fred has done wrong.
- b) Work out  $48 \times 16$  correctly.