# Williamwood High School

# MATHEMATICS
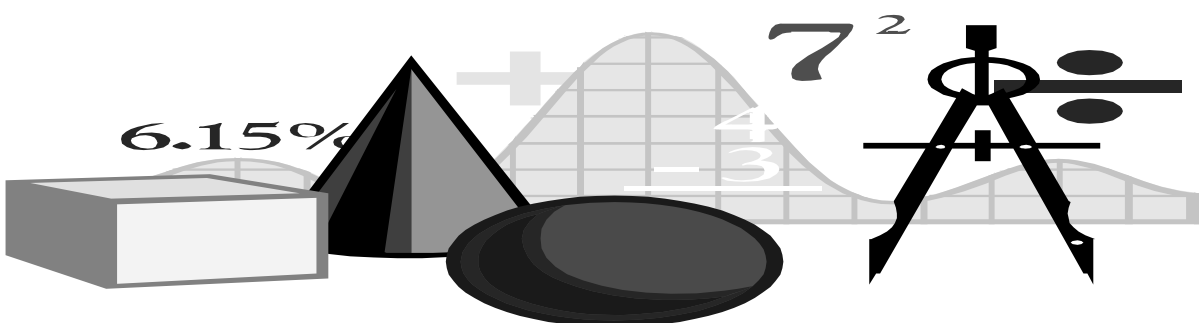
# BROAD GENERAL EDUCATION

# S2

# DAILY HOMEWORK BOOKLET

**Notes:**

1. CALCUALTORS MAY ONLY BE USED WHEN INSTRUCTED
2. ATTEMPT ALL QUESTIONS
3. SHOW WORKING FOR ALL QUESTIONS

# S2 Daily Homework                    Week 1

## Monday

1. Find 13.86 + 4.71
2. Find 23.98 – 14.51
3. Find 3.41 x 5
4. 1.80 ÷ 6
5. Simplify 3e + 4 – 2e + 8
6. Simplify 4r + 9 + 9s – 4 – 2r + 3s
7. 4e – 5 = 15
8. 7f + 3 = 52
9. Find the next 2 numbers in the sequence: 1, 4, 7, ………
10. Find the area of a square with side length of 5m.

## Tuesday

1. Find 45.91 + 36.42
2. Find 56.98 – 13.42
3. Find 7.56 x 4
4. 7.44 ÷ 4
5. Simplify 8h + 7 + 3h - 5
6. Simplify 6u + 12 + v – u + 5v - 7
7. 8g – 2 = 54
8. 3e – 12 = 15
9. Find the next 2 numbers in the sequence: 39, 35, 31, ………
10. Find the area of a rectangle with side length of 6m by 3m.

## Wednesday

1. Find 45.23 + 34.19
2. Find 14.90 – 3.71
3. Find 45.28 x 6
4. 67.5 ÷ 5
5. Simplify 8f + 7 – 3f - 8
6. Simplify 8c + 4e + 8 – 5c – 4e - 2
7. 4h + 8 = 28
8. 5j – 3 = 32
9. Find the next 2 numbers in the sequence: 4, 8, 16, ………
10. Find the perimeter of a square with side length of 3.4m.

## Thursday

1. Find 28.19 + 12.21
2. Find 67.37 – 26.41
3. Find 18.26 x 9
4. 4.53 ÷ 3
5. Simplify 12 + 2a – 9 + 4a
6. Simplify 8e + 3 + 2q – 7e – 1 + 5q
7. 10z + 12 = 72
8. 3e + 9 = 24
9. Find the next 2 numbers in the sequence: 1, 4, 9, ………
10. Find the perimeter of a rectangle with side length of 6m by 2.1m.

S2 Daily Homework                                        Week 2

**Monday**
If $e = -2$, $f = 3$, $g = -1$ and $h = 4$, evaluate the following:

1. $2e$
2. $ef$
3. $3hg$
4. $e + g$
5. $h - g$
6. $4g + h$
7. $e^2 + fg$
8. $eg + 2f - h$
9. $ef - f^2 + gh$
10. $efgh$

**Tuesday**
If $p = -5$, $q = 2$, $r = -3$ and $s = 1$, evaluate the following:

1. $qr$
2. $pr$
3. $p - s - r$
4. $r + qr$
5. $p^2 - rs$
6. $2r - qs + 5p$
7. $(q - p)^2$
8. $(r - s)^2 + pq$
9. $3r^2$
10. $q^3r$

**Wednesday**
If $g = 7$, $h = -3$, $i = 2$ and $j = -1$, evaluate the following:

1. $h + i - j$
2. $gh - i$
3. $hj^2$
4. $(i - h)^3$
5. $4g - 2h$
6. $ij - 5j$
7. $i^2 - hj + 6$
8. $h - j - i - g$
9. $4hi - gj$
10. $(hij)^2$

**Thursday**
If $c = 5$, $d = -2$, $e = 4$ and $z = -3$, evaluate the following:

1. $de$
2. $dz - 3c$
3. $2c - 5d$
4. $d - 4e + z$
5. $c + d^2 - ez$
6. $e - dz + cd$
7. $cde - 4ez$
8. $c^2 + d^2 + ez$
9. $cd^2 - de + z^2d$
10. $cde^2$

# S2 Daily Homework                    Week 3

## Monday

1. 3.87 x 500
2. 17.37 x 8000
3. 72 ÷ 900

Simplify the following:

4. 6e – 3g + 7e + 7g
5. 9w + 4g – 8h – 2g + 6h – 5w

Find the following:

6. 25% of £344
7. 30% of £820
8. 6% of £600
9. Find a pattern for the following:

| E | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| R | 5 | 8 | 11 | | |

## Tuesday

1. 8.36 x 800
2. 12.06 x 5000
3. 48 ÷ 6000

Simplify the following:

4. 3e – 8g + 10e + 5g
5. 2w + 5g – 6h – g + 16h + 3w

Find the following:

6. 25% of £616
7. 30% of £1340
8. 6% of £9000
9. Find a pattern for the following:

| C | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| B | 7 | 11 | 15 | | |

## Wednesday

1. 7.08 x 500
2. 34.98 x 2000
3. 8.1 ÷ 900

Simplify the following:

4. 9e – 8g + 10e + 5g
5. 10w - 8g – 7h + 4g - 2h – 4w

Find the following:

6. 25% of £2096
7. 30% of £1870
8. 6% of £20,000
9. Find a pattern for the following:

| N | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| M | 11 | 19 | 27 | | |

## Thursday

1. 2.981 x 400
2. 27.97 x 3000
3. 75 ÷ 500

Simplify the following:

4. e – 17g + 3e + 7g
5. 8w - 5g + 3h – 4g + 2h – 3w

Find the following:

6. 25% of £1832
7. 30% of £10,400
8. 6% of £120
9. Find a pattern for the following:

| P | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| L | 0 | 5 | 10 | | |

S2 Daily Homework                    Week 4

**Monday**

Simplify the following expressions:

1. $2e - 4r + 5e - 6r$
2. $4 - 8f + 5 + 5f$
3. $6y - 3 + 5u + 2 - 3y + 2u$
4. $a \times a$
5. $2a \times 3b$
6. $5r \times 2r$
7. $4ef + 2ef$
8. $(3w)^2$
9. $7f^2 - 2f \times 2f$
10. $4d^3 - 3d^2 + 9d^3 + 5d^2$

**Tuesday**

Simplify the following expressions:

1. $6v - 3d - 2v + 5d$
2. $5q + 9 - 8q - 1$
3. $7 - 5z + 2j + 3 + 4z - 8j$
4. $c \times c$
5. $3e^2 \times 2e$
6. $4gh - gh$
7. $6ef \times 2ef$
8. $(5w)^2$
9. $4b^2c \times 2bc$
10. $(2e)^3$

**Wednesday**

Simplify the following expressions:

1. $3i - 4j + 9i - 2j$
2. $10 - 3e + 12 - 5e$
3. $6t - 3 - 6y + 4t - 2y + 1$
4. $4e \times e^2$
5. $7f \times 3f$
6. $10d \times 4d^3$
7. $3e \times 4r - 2e \times 2r$
8. $(6f)^2$
9. $12e^2 - 4e \times 3e$
10. $a - 3a^2 + 4a^3 - 3a^2 - a^3$

**Thursday**

Simplify the following expressions:

1. $10p - 5q + 2p - 3q$
2. $14 - 5f + 3w - 5 + 2f - 6w$
3. $4g \times 5g$
4. $-b \times 3b$
5. $4r^2 \times 3r^2$
6. $6ed \times 2e^2d$
7. $(4b)^3$
8. $4d \times 5d \times 2d$
9. $2e^2 \times 3e \times 5e^2$
10. $20d^2 - 4d \times (-2d)$

# S2 Daily Homework                     Week 5

## Monday

1. Complete the following table:

| M | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| T | 15 | 30 | 45 | | |

2. Find a formula for the table above
3. Using the formula find the value of T when M is 9.
4. Complete the following table:

| T | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| C | 4 | 6 | 8 | | |

5. Find a formula for the table above
6. Using the formula, find the value of C when T is 14.
7. Complete the following table:

| S | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| M | 4 | 7 | 10 | | |

8. Find a formula for the table above.
9. Using the formula, find the value of M when S is 11.

## Tuesday

1. Complete the following table:

| P | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Q | 50 | 100 | 150 | | |

2. Find a formula for the table above
3. Using the formula find the value of Q when P is 10.
4. Complete the following table:

| T | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| L | 6 | 11 | 16 | | |

5. Find a formula for the table above
6. Using the formula, find the value of L when T is 30.
7. Complete the following table:

| E | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| G | 3 | 5 | 7 | | |

8. Find a formula for the table above.
9. Using the formula, find the value of G when E is 19.

## Wednesday

1. Complete the following table:

| B | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| A | 12 | 24 | 36 | | |

2. Find a formula for the table above
3. Using the formula find the value of A when B is 9.
4. Complete the following table:

| N | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| P | 3 | 5 | 7 | | |

5. Find a formula for the table above
6. Using the formula, find the value of P when N is 13.
7. Complete the following table:

| P | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| S | 50 | 90 | | | |

8. Find a formula for the table above.
9. Using the formula, find the value of S when P is 12.

## Thursday

1. Complete the following table:

| M | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| B | 440 | 660 | 880 | | |

2. Find a formula for the table above
3. Using the formula find the value of B when M is 8.
4. Complete the following table:

| T | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| A | 20 | 30 | 40 | | |

5. Find a formula for the table above
6. Using the formula, find the value of A when T is 17.
7. Complete the following table:

| T | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| V | 15 | 22 | | | |

8. Find a formula for the table above.
9. Using the formula, find the value of V when T is 23.

# S2 Daily Homework                    Week 6

## Monday
Simplify the following expressions:

1. 2e + 5r + 3e + 2r
2. 6y + 12w + 3y + 2w
3. 9i + 5j – 3i – 4j
4. 10d + 6e – 4d – e
5. 4a – 2b + 3a + 5b
6. 2h – 7i – 5h + 9i
7. 10 – 4y + 3z – 7 + 5y – 7z
8. 12 – 3u – 4v – 3u + 5 – 2v
9. 14 + 5j – 18 + 3r – 6j + 5r
10. 3w – 7 + 4f – 3w + 1 - f

## Tuesday
Simplify the following expressions:

1. 4e + 5r + 6e + 8r
2. 7y + 9w + 4y + 4w
3. 8i + 6j – 2i – 4j
4. 16d + e – 13d – 8e
5. 7a – 9b + 3a + 4b
6. 10h – 9i – 7h + 4i
7. 19 – 5y + 7z – 11 + 6y – 8z
8. 24 – 9u – 7v – 4u + 11 – 5v
9. 37 + 12j – 46 + r – 7j + 8r
10. 6w – 4 + 3f – 5w + 7 - 5f

## Wednesday
Simplify the following expressions:

1. 3e + 9r + 3e + 3r
2. 7y + 23w + 3y + 3w
3. 9i + 9j – 3i – 4j
4. 20d + 7e – 4d – e
5. 4a – 3b + 3a + 9b
6. 3h – 7i – 9h + 9i
7. 20 – 4y + 3z – 7 + 9y – 7z
8. 23 – 3u – 4v – 3u + 9 – 3v
9. 24 + 9j – 28 + 3r – 7j + 9r
10. 3w – 17 + 8f – 2w + 2 - 4f

## Thursday
Simplify the following expressions:

1. 7e + 7r + 3e + 7r
2. 6y + 32w + 3y + 2w
3. 4i + 7j – 3i – 4j
4. 30d + 6e – 4d – e
5. 4a – 2b + 3a + 2b
6. 2h – 8i – 2h + 4i
7. 30 – 4y + 3z – 8 + 2y – 8z
8. 37 – 3u – 4v – 3u + 7 – 7v
9. 34 + 7j – 38 + 3r – 6j + 7r
10. 3w – 8 + 4f – 3w + 3 - f

## S2 Daily Homework                                    Week 7

**Monday**
1. Find 10% of £240
2. Find 25% of £304
3. Find 6% of £700
4. Find 35% of £630
5. Find $33\frac{1}{3}$% of £168
6. Change 4m in to cm.
7. Change 3mm into cm.
8. Simplify the ratio 4 : 16
9. The ratio of boys to girls is 7 : 3. If there are 49 boys, how many girls will there be?
10. Solve 4w + 4 = 12

**Tuesday**
1. Find 10% of £690
2. Find 25% of £2096
3. Find 6% of £400
4. Find 35% of £390
5. Find $66\frac{2}{3}$% of £1923
6. Change 5.2m in to cm.
7. Change 12mm into cm.
8. Simplify the ratio 8 : 24
9. The ratio of boys to girls is 5 : 2. If there are 12 girls, how many boys will there be?
10. Solve 5j - 3 = 32

**Wednesday**
1. Find 10% of £720
2. Find 25% of £1988
3. Find 6% of £1200
4. Find 65% of £790
5. Find $12\frac{1}{2}$% of £450
6. Change 7m in to mm.
7. Change 7.14mm to cm.
8. Simplify the ratio 26 : 36
9. The ratio of wet days to sunny days is 4 : 9. If there are 16 wet days how many sunny days will there be?
10. Solve 11n + 4 = 114

**Thursday**
1. Find 10% of £465
2. Find 25% of £2880
3. Find 6% of £1540
4. Find 35% of £990
5. Find $17\frac{1}{2}$% of £452
6. Change 12.9m in to cm.
7. Change 0.45mm into cm.
8. Simplify the ratio 42 : 24
9. The ratio of green to yellow is 9 : 5. If there are 35 yellow how many green are there?
10. Solve 7e - 5 = 16

S2 Daily Homework                               Week 8

**Monday**

Simplify the following:
1.  4a + 2b + 3a + 5b
2.  7y + 5z – 3y + 2z
3.  5r + 10 – 3p – 6 + 4p – 4r
4.  5 – 3e + 7q + 7e – 9q + 4
Evaluate the following when e = 5, f = 2 and g = 7:
5.  e + g
6.  g – f
7.  ef
8.  2eg – ef
9.  $ef^2$
10. $(e – f)^2 + 2g$

**Tuesday**

Simplify the following:
1.  5f + 3g + 10f + g
2.  9u + 3v – 8u - v
3.  5 – 2b + 6c – 3 – 6c + 5b
4.  8i – 8 + 4j – 3 – 2i + 9j
Evaluate the following when p = 3, q = 1 and r = 9:
5.  2p
6.  2r – p
7.  qp
8.  5q + pr
9.  $rq^2$
10. $(r – q)^2 + 5p$

**Wednesday**

Simplify the following:
1.  5e + 2f + 2e + 3f
2.  9x – 6f – 3x + 7f
3.  12 + 6j – 4k + 3j – 8 – 3k
4.  14q + 3w – 9 + 2w – 3q + 2
Evaluate the following when d = 4, e = 2 and f = 3:
5.  d - f
6.  2d + f
7.  de + ef
8.  10d – 4e
9.  $(ef)^2$
10. $(d – e)^2 + 4ef$

**Thursday**

Simplify the following:
1.  7h + 4n – 6h + 2n
2.  8m – 3d + 2m + 5d
3.  4a – 4 + 5q – 3a + 9 – 2q
4.  5g – 2 + 3m – 7m + 9 - 4g
Evaluate the following when i = 7, j = 2 and k = 4
5.  4i
6.  ij
7.  4j + 10k
8.  ik – jk
9.  $ij^2 – j$
10. $(i – j)^2 + 10i$

S2 Daily Homework          Week 9

**Monday**
Simplify the following ratio:
1.  6 : 9
2.  28 : 35
3.  32 : 48
4.  The ratio of wet to dry is 3 : 7. If there are 12 wet days, how many are dry?
5.  Share £64000 in the ratio of 5 : 3
6.  Share £320565 in the ratio of 2 : 5
7.  If 3 shirts cost £75, find the cost of 9 shirts.
8.  If 7 cups of coffee cost £17.85, find the cost of 11 cups of coffee.

**Tuesday**
Simplify the following ratio:
1.  18 : 24
2.  35 : 60
3.  17 : 34
4.  The ratio of wet to dry is 4 : 9. If there are 36 dry days, how many are wet?
5.  Share £144000 in the ratio of 1 : 11
6.  Share £2142815 in the ratio of 2 : 3
7.  If 3 shirts cost 63, find the cost of 12 shirts
8.  If 6 cups of coffee cost £18.90, find the cost of 10 cups of coffee.

**Wednesday**
Simplify the following ratio:
1.  14 : 42
2.  21 : 39
3.  27 : 81
4.  The ratio of wet to dry is 8 : 5. If there are 48 wet days, how many are dry?
5.  Share £169000 in the ratio of 10 : 3
6.  Share £1881.6 in the ratio of 2 : 6
7.  If 9 shirts cost £468, find the cost of 13 shirts.
8.  If 5 cups of coffee cost £20.50, find the cost of 17 cups of coffee.

**Thursday**
Simplify the following ratio:
1.  18 : 46
2.  16 : 64
3.  36 : 63
4.  The ratio of wet to dry is 7 : 4. If there are 56 wet days, how many are dry?
5.  Share £72000 in the ratio of 4 : 5
6.  Share £3991.4 in the ratio of 5 : 2
7.  If 6 shirts cost £564, find the cost of 11 shirts.
8.  If 7 cups of coffee cost £22.05, find the cost of 9 cups of coffee.

## S2 Daily Homework

## Week 10

### Monday

Remove the following brackets and simplify where possible:

1. $3(h - 3)$
2. $5(h + 2)$
3. $8(j - 2) + 3$
4. $7(e + 4) - 2e$
5. $9(d - 1) + 4$
6. $5(h - 3) + 4(h + 2)$
7. $3(w - 1) - 3(w - 2)$
8. $10 + 4(y - 1) - 2(y - 3)$
9. $12 - 5(g - 3) - 2(g - 5)$

### Tuesday

Remove the following brackets and simplify where possible:

1. $4(p - 2)$
2. $6(i + 4)$
3. $5(h - 1) + 2$
4. $5(u - 2) + 2u$
5. $8(a - 2) - 5$
6. $3(w - 2) + 4(w - 1)$
7. $4(f - 2) - 5(f - 8)$
8. $6 + 2(e - 3) - 3(e - 2)$
9. $7 - 5(p + 1) - (p - 4)$

### Wednesday

Remove the following brackets and simplify where possible:

1. $4(e - 7)$
2. $7(q - 1)$
3. $5(w - 2) - 4$
4. $9(z - 1) - 4z$
5. $7(u - 9) + 5$
6. $4(n + 5) + 3(n + 2)$
7. $7(i - 3) - 6(i - 7)$
8. $1 + 4(k - 3) - 7(k + 4)$
9. $9 - 3(f - 1) - 4(f - 2)$

### Thursday

Remove the following brackets and simplify where possible:

1. $4(u - 3)$
2. $2(g + 2)$
3. $7(d - 2) + 1$
4. $7(r - 3) - 4r$
5. $8(c - 2) + 2$
6. $4(k - 1) + 6(k + 2)$
7. $7(i - 2) - 4(i - 3)$
8. $18 + 5(v - 2) - 9(v - 1)$
9. $14 - 2(s - 2) - 5(s - 3)$

# S2 Daily Homework                    Week 11

## Monday
1. List the first 5 multiples of 4.
2. Give all the factors of 18.
3. Express 72 as a product of prime factors.
4. Find -18 + 62
5. Find 29 + (-15)
6. Find 26 x (-4)
7. Find -35 ÷ (-7)
8. Round the following number to 1 sig fig: 246
9. Round the following number to 2 sig figs: 38965
10. Round the following number to 3 sig figs: 4.186380

## Tuesday
1. List the first 5 multiples of 9.
2. Give all the factors of 32.
3. Express 140 as a product of prime factors.
4. Find -23 + 109
5. Find 64 + (-41)
6. Find 98 x (-7)
7. Find -34 ÷ (2)
8. Round the following number to 1 sig fig: 786
9. Round the following number to 2 sig figs: 46672
10. Round the following number to 3 sig figs: 38777076

## Wednesday
1. List the first 5 multiples of 8.
2. Give all the factors of 40.
3. Express 200 as a product of prime factors.
4. Find -82 – (-19)
5. Find 47 + (-53)
6. Find 329 x (-8)
7. Find -85 ÷ (-5)
8. Round the following number to 1 sig fig: 565
9. Round the following number to 2 sig figs: 9476
10. Round the following number to 3 sig figs: 5.73854

## Thursday
1. List the first 5 multiples of 3.
2. Give all the factors of 33.
3. Express 80 as a product of prime factors.
4. Find -60 – (-56)
5. Find 78 + (-127)
6. Find 407 x (-9)
7. Find -120 ÷ (-6)
8. Round the following number to 1 sig fig: 197
9. Round the following number to 2 sig figs: 3307
10. Round the following number to 3 sig figs: 6.5626

**Monday**
Multiply out the following and simplify:

1. $3(h - 5)$
2. $4r(r - 3)$
3. $2(j + 4) - 3$
4. $3 - 5(n - 3)$
5. $12 + 4(g - 7) + 10$
6. $7(f - 2) + 2(f + 4)$
7. $4(w + 3) - 2(w - 1)$
8. $10 - 5(k + 1) - 4(k - 2)$

**Tuesday**
Multiply out the following and simplify:

1. $7(r + 2)$
2. $7g(g - 3)$
3. $9(u + 2) - 12$
4. $4 - 2(p + 1)$
5. $12 - 3(p - 1) + 4$
6. $4(k - 3) + 2(k - 1)$
7. $7(d - 7) - 2(d - 3)$
8. $14 - 3(h - 2) - 3(h - 1)$

**Wednesday**
Multiply out the following and simplify:

1. $6(q - 8)$
2. $8j(j - 3)$
3. $4(a - 6) + 4$
4. $5 - 2(m - 1)$
5. $9 + 5(z - 3) + 2z$
6. $12(e - 3) + 4(e - 1)$
7. $5(j - 3) - 2(j - 5)$
8. $14 - 3(h - 3) - 5(h + 2)$

**Thursday**
Multiply out the following and simplify:

1. $6(q - 3)$
2. $7g(2g - 3)$
3. $9(w - 3) + 3w$
4. $11 - 4(f - 3)$
5. $1 + 4(v - 3) + 5v$
6. $4(u - 4) + 3(u - 3)$
7. $9(w - 4) - 4(w - 2)$
8. $6 - 5(s - 1) - 2(s - 4)$

# S2 Daily Homework                    Week 13

## Monday
1. List the first 5 multiples of 7.
2. List the factors of 36.
3. Express 48 as a product of prime factors.
4. Find 4 – (-7)
5. Find 5 + (-3)
6. Find -3 x (-2)
7. Find 56 ÷ (-7)
8. Round the following number to 1 sig fig: 4.21
9. Round the following number to 2 sig figs: 59373
10. Round the following number to 3 sig figs: 0.000037896

## Tuesday
1. List the first 4 multiples of 8.
2. List the factors of 24.
3. Express 52 as a product of prime factors.
4. Find 10 – (-5)
5. Find 9 + (-7)
6. Find -12 x (-4)
7. Find -144 ÷ (12)
8. Round the following number to 1 sig fig: 0.0004893
9. Round the following number to 2 sig figs: 6776
10. Round the following number to 3 sig figs: 3090783

## Wednesday
1. List the first 7 multiples of 3.
2. List the factors of 74.
3. Express 100 as a product of prime factors.
4. Find 2 – (-3)
5. Find 12 + (-2)
6. Find -7 x 5
7. Find -48 ÷ (-6)
8. Round the following number to 1 sig fig: 0.01003534
9. Round the following number to 2 sig figs: 48909
10. Round the following number to 3 sig figs: 13.4965

## Thursday
1. List the first 6 multiples of 5.
2. List the factors of 84.
3. Express 36 as a product of prime factors.
4. Find 18 – (-4)
5. Find -3 + (-3)
6. Find -6 x (-2)
7. Find 90 ÷ (-30)
8. Round the following number to 1 sig fig: 4.9037
9. Round the following number to 2 sig figs: 4988363
10. Round the following number to 3 sig figs: 4.000128

# S2 Daily Homework                    Week 14

## Monday
Multiply out the following and simplify:

1. $3(2x + 1) + 2(4x + 3)$
2. $5(3x + 4) + 4(3x - 4)$
3. $4(2x + 3) + 2(x - 2)$
4. $2(3x + 4) + 3(x - 4)$
5. $5(x + 2) + 6(2x - 3)$
6. $4(x - 3) + 3(2x + 5)$
7. $5(2x - 4) + 2(x + 8)$
8. $3(x - 4) + 2(2x - 3)$

## Tuesday
Multiply out the following and simplify:

1. $8(x - 1) + 3(4x - 3)$
2. $2(4x + 1) - 3(2x - 2)$
3. $4(2x - 3) - 2(3x - 7)$
4. $5(3x + 1) - 3(2x + 2)$
5. $6(2x + 3) - 5(x + 3)$
6. $x(x + 3) + x(x + 4)$
7. $x(x + 6) + x(x - 2)$
8. $x(x - 4) + x(x + 7)$

## Wednesday
Multiply out the following and simplify:

1. $x(x - 3) + x(x - 5)$
2. $x(x + 6) + x(x - 8)$
3. $x(2x + 3) + x(3x + 4)$
4. $x(4x + 5) + x(2x - 3)$
5. $x(x + 8) + x(3x - 5)$
6. $5x(x + 3) - 3x(x - 2)$
7. $6x(x - 2) - 4x(x + 1)$
8. $3x(2x + 3) + 2x(4x - 3)$

## Thursday
Multiply out the following and simplify:

1. $6x(4x + 2) - 3x(7x + 4)$
2. $4x(3x + 9) - 6x(2x + 6)$
3. $5x(4x + 4) - 7x(3x - 1)$
4. $3x(8x + 8) - 4x(2x - 3)$
5. $6x(5x + 2) - 3x(5x - 7)$
6. $2x(9x - 4) - 5x(3x - 6)$
7. $5x(5x - 7) - 2x(6x - 7)$
8. $9x(9x - 4) - 3x(5x - 5)$

S2 Daily Homework                    Week 15

**Monday**
Find the following, giving your answer in the simplest form:

1. $^1/_2 + {}^1/_3 + {}^3/_4$
2. $^2/_7 + {}^4/_5$
3. $^4/_5 \times {}^{15}/_9$
4. $^3/_{14} \div {}^6/_7$
5. $^4/_7 \times {}^3/_{10}$
6. $^{13}/_{14} - {}^5/_6$
7. $8^1/_2 - 3^1/_3$

**Tuesday**
Find the following, giving your answer in the simplest form:

1. $^2/_3 + {}^1/_5$
2. $^3/_4 + {}^7/_9$
3. $^3/_7 \times {}^5/_{12}$
4. $^5/_{11} \div {}^7/_{22}$
5. $^3/_5 \times {}^4/_{15}$
6. $^{17}/_{18} - {}^4/_5$
7. $4^3/_2 - 1^1/_7$

**Wednesday**
Find the following, giving your answer in the simplest form:

1. $^4/_5 + {}^2/_3$
2. $^7/_9 + {}^3/_4$
3. $^6/_{14} \times {}^{25}/_9$
4. $^{10}/_{21} \div {}^5/_{14}$
5. $^5/_6 \times {}^4/_7$
6. $^9/_{10} - {}^1/_4$
7. $3^6/_7 - 2^1/_2$

**Thursday**
Find the following, giving your answer in the simplest form:

1. $^3/_4 + {}^4/_9$
2. $^7/_8 + {}^2/_{12}$
3. $^4/_5 \times {}^{15}/_9$
4. $^7/_{10} \div {}^4/_5$
5. $^3/_8 \times {}^4/_9$
6. $^{17}/_{20} - {}^4/_5$
7. $5^5/_6 - 2^1/_3$

# S2 Daily Homework                                    Week 16

## Monday
Solve the following equations:

1. $2(x + 3) = 16$
2. $3(x + 3) = 15$
3. $2(4x + 5) = 26$
4. $3(2x + 1) = 21$
5. $2(5x + 3) = 36$
6. $3(x + 4) = 24$
7. $4(x + 1) = 24$

## Tuesday
Solve the following equations:

1. $2(4x + 3) = 30$
2. $3(3x + 1) = 12$
3. $2(4x + 1) = 22$
4. $3(3x + 4) = 21$
5. $3(2x + 3) = 69$
6. $5(3x + 2) = 100$
7. $8(2x + 3) = 48$

## Wednesday
Solve the following equations:

1. $3(2x + 1) = 10$
2. $2(4x + 6) = 7$
3. $2(10x + 4) = 27$
4. $4(8x + 2) = 5$
5. $2(8x + 12) = 18$
6. $6 = 3(x - 1)$
7. $6 = 2(2x - 3)$

## Thursday
Solve the following equations:

1. $2(6x + 4) = 21$
2. $5(2x - 5) = 15$
3. $12(2x + 2) = 60$
4. $12 = 3(x - 2)$
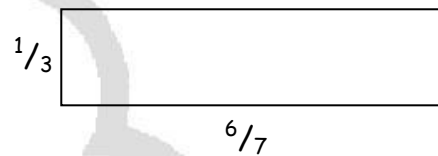5. $8 = 4(x - 1)$
6. $4 = 2(2x - 7)$
7. $1 = 2(x - 4)$

# S2 Daily Homework                    Week 17

## Monday
1. Change to top heavy fractions:
   a. $4^3/_5$      b.    $6^4/_7$
2. Change to mixed numbers:
   a. $^{13}/_4$      b.    $^{18}/_5$
3. What is $^6/_7 + {}^4/_9$ ?
4. Find $5^1/_2 - 1^2/_7$
5. Work out the perimeter of this shape:

$^1/_5$ 

$^4/_9$

6. What is $^5/_6 \times {}^3/_{10}$ ?
7. What is $^8/_9 \times {}^5/_{12}$ ?
8. Find $4^2/_3 \times 3^3/_4$
9. Find $^5/_6 \div {}^3/_4$

## Tuesday
1. Change to top heavy fractions:
   a. $9^4/_6$      b.    $3^1/_4$
2. Change to mixed numbers:
   a. $^{25}/_3$      b.    $^{16}/_3$
3. What is $^5/_8 + {}^2/_3$ ?
4. Find $3^3/_4 - 2^3/_{10}$
5. Work out the perimeter of this shape:

$^1/_3$

$^6/_7$

6. What is $^5/_8 \times {}^4/_7$ ?
7. What is $^3/_5 \times {}^6/_9$ ?
8. Find $1^1/_2 \times 2^2/_9$
9. Find $^8/_9 \div {}^2/_3$

## Wednesday
1. Change to top heavy fractions:
   a. $4^1/_3$      b.    $3^2/_5$
2. Change to mixed numbers:
   a. $^{31}/_6$      b.    $^{12}/_7$
3. What is $^4/_{11} + {}^3/_8$ ?
4. Find $2^3/_4 - 1^5/_6$
5. Work out the perimeter of this shape:

$^2/_5$

$1^2/_3$

6. What is $^7/_8 \times {}^4/_{13}$ ?
7. What is $^5/_9 \times {}^7/_3$ ?
8. Find $1^1/_5 \times 1^5/_7$
9. Find $^5/_6 \div {}^3/_4$

## Thursday
1. Change to top heavy fractions:
   a. $8^2/_8$      b.    $4^6/_{13}$
2. Change to mixed numbers:
   a. $^{25}/_6$      b.    $^{46}/_5$
3. What is $^2/_3 + {}^1/_{11}$ ?
4. Find $1^3/_7 - {}^5/_9$
5. Work out the perimeter of this shape:

$^4/_5$

$2^1/_2$

6. What is $^6/_5 \times {}^7/_{12}$ ?
7. What is $^4/_9 \times {}^3/_{14}$ ?
8. Find $2^2/_3 \times 1^5/_8$
9. Find $^6/_{13} \div {}^3/_{26}$

S2 Daily Homework                    Week 18

**Monday**
Expand the brackets and simplify:
1. 4(a + 3) + 3(a + 4)
2. 5(b – 2) + 5(b – 8)
3. 3(2c + 6) + 4(4 – 3c)
4. 4(5d – 7) – 3(2d + 1)
5. 7(e + 4) – 5(3e – 6)
6. 9f – 4(6 – 3f) + 3(f + 1)
7. 4g + 3(5g + 7) – 6(8 – g)
8. 5h + 4j – (3h + 2) – (5 – 2j)

**Tuesday**
Expand the brackets and simplify:
1. 5(a + 2) + 3(a + 5)
2. 6(b – 1) + 3(b – 4)
3. 4(3c + 1) + 2(3 – 5c)
4. 6(6d – 2) – 4(6d + 5)
5. 5(e + 2) – 3(4e – 7)
6. 8f – 2(3 – f) + 4(f + 9)
7. 5g + 4(2g + 4) – 3(7 – g)
8. 7h + 2j – (5h + 1) – (7 – 3j)

**Wednesday**
Expand the brackets and simplify:
1. 6(a + 9) + 4(a + 1)
2. 2(b – 4) + 3(b – 3)
3. 5(2c + 1) + 7(9 – 5c)
4. 9(4d – 1) – 6(3d + 2)
5. 10(e + 2) – 4(2e – 5)
6. 8f – 5(3 – 7f) + 2(f + 4)
7. 3g + 2(4g + 3) – 4(5 – g)
8. 2h + 3j – (8h + 9) – (4 – 7j)

**Thursday**
Expand the brackets and simplify:
1. 2(a + 5) + 6(a + 7)
2. 3(b – 6) + 8(b – 9)
3. 5(3c + 4) + 2(7 – 4c)
4. 9(3d – 1) – 5(4d + 3)
5. 3(e + 2) – 6(2e – 9)
6. 5f – 2(3 – 5f) + 4(f + 3)
7. 2g + 4(3g + 5) – 4(3 – g)
8. 8h + 3j – (9h + 1) – (2 – 7j)

# S2 Daily Homework                Week 19

## Monday
Find the mean of the following numbers:
1. 7, 2, 5, 6, 9, 7

2. 15, 19, 23, 16, 17, 10

For the following sets of data, find the range, mode and median.

3. 3, 4, 7, 8, 8, 8, 10, 12, 13, 15, 19, 20

4. 21, 21, 24, 27, 29, 30, 30, 30, 30, 38, 40

5. 45, 28, 21, 34, 29, 19, 37, 29, 44, 37, 44, 26, 44, 17, 44, 49, 36, 44, 13, 22, 38, 44

## Tuesday
Find the mean of the following numbers:
1. 12, 8, 4, 11, 10

2. 9, 7, 10, 6, 8, 12, 4, 8

For the following sets of data, find the range, mode and median.

3. 6, 6, 6, 8, 9, 10, 11, 11, 14, 15, 16, 18

4. 35, 35, 37, 38, 39, 39, 40, 41, 41, 41, 42

5. 17, 7, 11, 19, 21, 38, 29, 18, 6, 14, 38, 29, 28, 38, 31, 33, 38, 41, 45, 48

## Wednesday
Find the mean of the following numbers:
1. 11, 9, 14, 7, 4

2. 114, 98, 106, 82

For the following sets of data, find the range, mode and median.

3. 9, 9, 10, 12, 13, 14, 14, 15, 17, 18

4. 56, 56, 57, 58, 59, 61, 61, 62, 63, 64

5. 7, 19, 6, 5, 17, 12, 21, 20, 14, 14, 11, 8, 17, 15, 15, 16, 12, 18, 19, 8, 7, 8, 8, 8,

## Thursday
Find the mean of the following numbers:
1. 5, 9, 7, 5, 8, 8

2. 11, 17, 7, 9, 6, 3, 7, 12

For the following sets of data, find the range, mode and median.

3. 35, 35, 37, 37, 38, 39, 40, 41, 42, 44

4. 101, 101, 102, 103, 105, 106, 108, 108

5. 56, 58, 61, 69, 70, 65, 54, 57, 60, 66, 45, 49, 56, 51, 56, 90, 56, 56

S2 Daily Homework                                    Week 20

**Monday**
Factorise the following expressions:

1. $3x + 12$
2. $6x + 15$
3. $8x - 20$
4. $6z + 3$
5. $10y + 5$
6. $xy + 7y$
7. $xz - 4z$
8. $2xy - 6x$
9. $x^2 - 6x$
10. $5y^2 + 7y$

**Tuesday**
Factorise the following expressions:

1. $8x^2 + 10x$
2. $9x^2 - 12x$
3. $6xy - 9x^2$
4. $8xz + 6x^2$
5. $18z^2 - 12yz$
6. $9y^2 - 3y$
7. $5z + 10z^2$
8. $6pq - 5p^2q^2$
9. $8ab + 4a^2b^2$
10. $2x^4 - 3x$

**Wednesday**
Factorise the following expressions:

1. $4x^4 + 12x$
2. $5x^2y - xy^2$
3. $5y^2 + 15y$
4. $3p^2 - 9p$
5. $8p^2 + 4p$
6. $x^3 + 7x^2 + 4x$
7. $2x^3 - 6x^2 + 8x$
8. $5y^3 + 10y^2 - 20y$
9. $y^3 + y^2$
10. $2x^3 - 4x^2$

**Thursday**
Factorise the following expressions:

1. $x^2y^2 - 6xy$
2. $xy - 4x^2$
3. $xy + 5y^2$
4. $2x^2y^2 + 6xy$
5. $x^3 + x^2y + xy^2$
6. $2x^3 - 8x^2 + 2x$
7. $x^3y^3 - x^2y^2 + xy$
8. $15p^2q - 3pq^2$

## S2 Daily Homework                          Week 21

---

**Monday**

1. Find  a. $\frac{3}{4}+\frac{1}{2}$    b. $\frac{15}{7}-\frac{2}{3}$    c. $1\frac{1}{6}+2\frac{4}{9}$

2. Find  a. $\frac{2}{7}\times\frac{11}{8}$    b. $\frac{14}{3}\div\frac{7}{10}$    c. $12\div1\frac{3}{4}$

3. A rectangle has a length of $2\frac{4}{9}$ and a breadth of $1\frac{1}{6}$ .
   a. Calculate the area.
   b. Calculate the perimeter.

4. Lola and Sarah are sharing a bag of sweets. If Lola eats $\frac{1}{3}$ and Sarah eats $\frac{2}{5}$,
   a. What fraction of the bag was eaten?
   b. How much is left over?

---

**Tuesday**

1. Find  a. $\frac{5}{6}+\frac{2}{3}$    b. $\frac{11}{5}-\frac{5}{4}$    c. $3\frac{2}{3}-1\frac{3}{8}$

2. Find  a. $\frac{3}{5}\times\frac{20}{3}$    b. $\frac{24}{7}\div\frac{8}{5}$    c. $7\div2\frac{5}{8}$

3. A rectangle has a length of $3\frac{1}{4}$ and a breadth of $2\frac{7}{12}$ .
   a. Calculate the area.
   b. Calcualte the perimeter.

4. Jay and Liam are sharing a pizza. If Jay eats $\frac{3}{7}$ and Liam eats $\frac{3}{8}$,
   a. What fraction of the pizza was eaten?
   b. How much is left over?

---

**Wednesday**

1. Find  a. $\frac{5}{4}+\frac{1}{8}$    b. $\frac{12}{5}-\frac{5}{6}$    c. $3\frac{2}{5}+1\frac{3}{4}$

2. Find  a. $\frac{6}{5}\times\frac{13}{9}$    b. $\frac{25}{12}\div\frac{10}{3}$    c. $9\div2\frac{5}{11}$

3. A square has a length of $1\frac{9}{11}$ units.
   a. Calculate the area.
   b. Calculate the perimeter.

4. Deb and Jo are sharing a tub of Pringles. If Deb eats $\frac{5}{9}$ and Jo eats $\frac{1}{6}$,
   a. What fraction were eaten in total?
   b. How much of the tub is left over?

---

**Thursday**

1. Find  a. $\frac{6}{7}+\frac{11}{14}$    b. $\frac{13}{6}-\frac{7}{8}$    c. $4\frac{1}{2}-3\frac{5}{8}$

2. Find  a. $\frac{9}{16}\times\frac{24}{27}$    b. $\frac{36}{21}\div\frac{6}{5}$    c. $3\div1\frac{5}{7}$

3. A square has a length of $2\frac{5}{6}$ units.
   a. Calculate the area.
   b. Calculate the perimeter.

4. Eric and Bob are sharing a bottle of juice. If Eric drinks $\frac{2}{5}$ and Bob drinks $\frac{3}{10}$,
   a. What fraction of the bottle was drunk?
   b. If the bottle contained 1L of juice, how much is left over?

# S2 Daily Homework                    Week 22

## Monday
Solve the following equations:

1. $12x + 7 = 2x + 27$
2. $14x + 6 = 7x + 13$
3. $9x + 4 = x + 24$
4. $8x + 1 = 4x + 15$
5. $3x + 10 = 4x + 3$
6. $8x + 7 = 4x + 35$
7. $9x + 1 = 3x + 10$

## Tuesday
Solve the following equations:

1. $7x + 2 = 5x + 12$
2. $x + 7 = 3x + 1$
3. $x + 18 = 6x + 3$
4. $2x + 11 = 4x + 5$
5. $3x + 20 = 5x + 3$
6. $8x + 19 = 12x + 5$
7. $11x + 12 = 8x + 20$

## Wednesday
Solve the following equations:

1. $4x - 5 = 3x + 1$
2. $6x - 2 = 5x + 4$
3. $7x - 4 = 5x + 2$
4. $9x - 1 = 7x + 7$
5. $8x - 4 = 5x + 8$
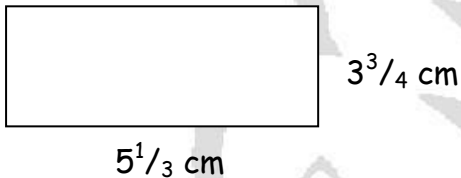6. $6x - 7 = x + 3$
7. $5x - 3 = x + 5$

## Thursday
Solve the following equations:

1. $4x - 7 = x + 8$
2. $6x - 1 = x + 29$
3. $12x - 5 = 8x + 3$
4. $4x - 2 = 2x + 1$
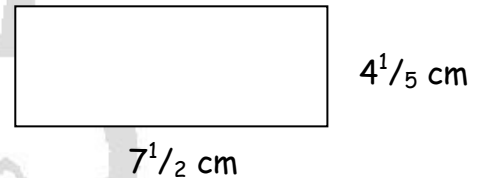5. $6x - 7 = 4x + 8$
6. $9x - 3 = 5x + 7$
7. $7x - 2 = 3x + 11$

## S2 Daily Homework

## Week 23

### Monday

1. Find $^3/_4 + {}^5/_8$
2. Find $^3/_4 - {}^5/_{12}$
3. Find $3^1/_2 + 4^1/_3$
4. Find $^2/_3 \times {}^5/_7$
5. Find $^3/_5 \div {}^3/_4$
6. Find $2^1/_4 \times 3^1/_2$
7. Find $6^2/_3 \div 2^1/_2$
8. Calculate the Area of the rectangle below:

   $3^3/_4$ cm

   $5^1/_3$ cm
9. Ben, Gill and Kate order 2 pizzas to share. Ben eats $1^1/_6$ of the pizza to himself. If Gill and Kate have the same amount, how much pizza does Kate eat?

### Tuesday

1. Find $^3/_8 + {}^5/_6$
2. Find $^4/_5 - {}^1/_4$
3. Find $1^1/_3 + 3^1/_4$
4. Find $^5/_8 \times {}^2/_3$
5. Find $^4/_9 \div {}^4/_{15}$
6. Find $5^4/_5 \times 1^2/_3$
7. Find $5^2/_5 \div 6^2/_5$
8. Calculate the Area of the rectangle below:

   $4^1/_5$ cm

   $7^1/_2$ cm
9. Ben, Gill and Kate order 3 pizzas to share. Ben eats $1^5/_8$ of the pizza to himself. If Gill and Kate have the same amount, how much pizza does Kate eat?

### Wednesday

1. Find $^7/_{10} + {}^4/_{15}$
2. Find $^9/_{16} - {}^1/_6$
3. Find $4^9/_{10} - 3^3/_4$
4. Find $^2/_3 \times {}^{15}/_{16}$
5. Find $^8/_{15} \div {}^2/_3$
6. Find $1^1/_7 \times 2^4/_5$
7. Find $2^5/_8 \div 1^2/_5$
8. Calculate the Area of the rectangle below:

   $6^2/_9$ cm
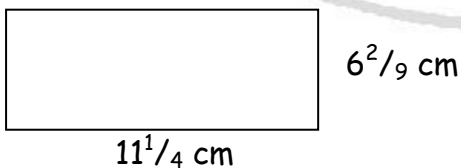
   $11^1/_4$ cm
9. Ben, Gill and Kate order 3 pizzas to share. Ben eats $1^3/_7$ of the pizza to himself. If Gill and Kate have the same amount, how much pizza does Kate eat?

### Thursday

1. Find $^6/_7 + {}^2/_3$
2. Find $^5/_8 - {}^2/_5$
3. Find $5^1/_6 - 1^4/_5$
4. Find $^7/_{10} \times {}^5/_{14}$
5. Find $^{10}/_{33} \div {}^{25}/_{36}$
6. Find $1^4/_9 \times 4^1/_2$
7. Find $1^1/_2 \div 1^3/_7$
8. Calculate the Area of the rectangle below:

   $4^1/_8$ cm
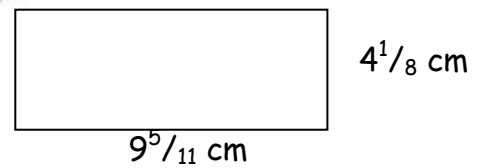
   $9^5/_{11}$ cm
9. Ben, Gill and Kate order 4 pizzas to share. Ben eats $1^8/_9$ of the pizza to himself. If Gill and Kate have the same amount, how much pizza does Kate eat?

# S2 Daily Homework                    Week 24

## Monday
Solve the following equations:

1. $6(2x - 1) = 18$
2. $2(x - 3) = 5$
3. $5(2x - 3) = 10$
4. $33 = 3(6x - 1)$
5. $16 = 4(5x - 6)$
6. $15 = 3(4x - 7)$
7. $12 = 3(x - 9)$

## Tuesday
Solve the following equations:

1. $3 = 2(x - 7)$
2. $4 = 3(x - 8)$
3. $7 = 2(2x - 7)$
4. $84 = 7(5x - 3)$
5. $66 = 6(6x - 7)$
6. $27 = 2(5x - 9)$
7. $21 = 3(2x - 1)$

## Wednesday
Solve the following equations:

1. $4x + 2 = 10$
2. $2x + 5 = 9$
3. $6x + 3 = 15$
4. $7x + 4 = 25$
5. $4(2x + 1) = 28$
6. $6x - 1 = 29$
7. $2(4x - 7) = 1$
8. $9x - 4 = 2$
9. $8(3x + 5) = 64$
10. $6(2x - 7) = 18$

## Thursday
Solve the following equations:

1. $4x - 2 = 10$
2. $2x - 5 = 9$
3. $6x - 3 = 15$
4. $3x - 8 = 10$
5. $4(2x - 1) = 28$
6. $3(6x + 4) = 39$
7. $2(3x + 8) = 2$
8. $10x + 2 = 16$
9. $4x - 7 = 4$
10. $3(4x + 6) = 10$

# S2 Daily Homework          Week 25

## Monday

1. Ages of people attending a concert are shown in this stem and leaf diagram.

```
                        Key
   1 | 7 8 9        n = 11   1 | 7 = 17
   2 | 0 2 8 8 8
   3 | 1 3 6
```

   a. Calculate the median & modal ages.
   b. Calculate the range.

Factorise:
2. $8x^2 + 10x$
3. $9x^2 - 12x$
4. $6xy - 9x^2$

## Tuesday

1. How much money pupils had is shown in this stem and leaf diagram.

```
   1 | 3 5           Key
   2 | 0 8 9     n = 10   1 | 3 = £1.30
   3 | 1  1  6  7
   4 | 8
```

   a. Calculate the median & modal amounts of money.
   b. Calculate the range.

Factorise:
2. $8xz + 6x^2$
3. $18z^2 - 12yz$
4. $9y^2 - 3y$

## Wednesday

1. Pupils were asked their eye colour.

| Favourite Colour | Number |
|---|---|
| Brown | 18 |
| Blue | 14 |
| Green | 9 |
| Grey | 4 |

Calculate the angle at centre for each eye colour.

2. Data can be shown below.

   1.8  1.9  2.3  4.5  3.9  1.0  2.8  2.3
   1.8  2.3  0.7  1.2  2.2  2.4  3.4

   a. Construct an ordered stem and leaf diagram.
   b. Find the mode, median & range.

## Thursday

1. S1 pupil grades are shown.

| Grade Obtained | Num of Pupils |
|---|---|
| A | 18 |
| B | 26 |
| C | 19 |
| D | 7 |
| E | 2 |

Calculate the angle at centre for each grade.

2. Data can be shown below.

   11  44  67  18  20  38  32  18  10  55
   51  62  21  21  39  48  51  65

   a. Construct an ordered stem and leaf diagram.
   b. Find the mode, median & range.

# S2 Daily Homework                    Week 26

## Monday
Solve the following equations:

1. $5(2x + 3) - 3(2x + 4) = 15$
2. $2(4x + 2) - 2(2x + 1) = 11$
3. $3(3x + 4) - 2(2x + 1) = 30$
4. $5(6x + 3) - 4(5x + 1) = 41$
5. $3(6x + 1) - 2(7x - 4) = 43$
6. $5(4x + 1) - 9(2x - 3) = 38$
7. $9(2x - 1) - 3(5x - 3) = 18$

## Tuesday
Solve the following equations:

1. $3(2 + 4x) + 3(5 - x) = 30$
2. $3x + 4 + 2(x - 3) = 8$
3. $3x + 4 - 2(x - 3) = 8$
4. $2(x - 1) - 4 + x = 12$
5. $4(x + 1) - 2x + 7 = 11$
6. $3(2x + 7) - 2(x - 1) = 19$
7. $6(x + 1) - 4(x + 1) = 0$

## Wednesday
Solve the following equations:

1. $7(5x + 2) + 4(8 - 7x) = 60$
2. $3(9x - 2) + 2(7 - 12x) = 20$
3. $8(x - 5) + 2(9 - 2x) = 2$
4. $7(3x - 4) - 4(3 - x) = 10$
5. $4x - 3 - 7(6 - x) = 10$
6. $6x + 8 - 2(2x - 9) = 31$
7. $13x - 2(4 + 5x) - 2 = 2$

## Thursday
Solve the following equations:

1. $6x + 3 + 2(4 - x) = 3$
2. $5(3 - 2x) - 4(1 - 2x) = 12$
3. $3(4 + 2x) - (x + 2) = 0$
4. $7(6 - 3x) - 3(4x - 2) = 10$
5. $5x - 9 - 4(2x - 3) = 18$
6. $8 - 5(4x - 1) + 19 = 22$
7. $9(2x - 3) - 5(3x - 7) = 6$

## Monday

1. A survey of 2000 cars was carried out into their place of origin. The results are shown opposite.



a. How many cars surveyed came from the UK?

b. How many cars came from Japan?

2. The stem and leaf diagram gives the marks of 18 pupils in a test.

```
1 | 2  5  9
2 | 1  6
3 | 7  7  8  9  9
4 | 0  1  2  2  2  2
5 | 3  7
```
1 | 2 represents 12
n = 18

a. Write down the modal mark.

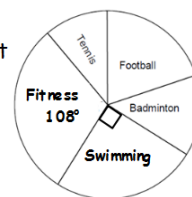b. Find the median mark.

3. The marks of 17 pupis in a test were

31  44  45  32  19  45  49  30  12  22  25  27  40  45  30  19  23

a. Show this information in a stem and leaf diagram.
b. Find the range of marks.
c. Write down the mode.
d. Find the median mark.

## Tuesday

1. 2880 people who use a sports centre were asked to name their favourite sport The results are shown opposite



a. How many people chose swimming?

b. How many people chose fitness?

2. The stem and leaf diagram below shows the lengths in minutes of 16 films.

```
10 | 3  5  8
11 | 2  4  5  9
12 | 0  1  3  5  8
13 | 1  4  4  4
```
10 | 3 represents 103

a. Find the range of the times.
b. Write down the modal time.
c. Find the median time.

3. The distances, in miles, driven over a 10 day period by a salesman were

103    125    146    133    125    109    140    135    125    149

a. Draw a stem and leaf diagramto illustrate this information.
b. Find the range.
c. Write down the modal distance travelled.
d. Find the median distance travelled.

## Wednesday

1. Over a period of time, the types of vehicle using a road junction were recorded. Overall 5760 vehicles used the road.
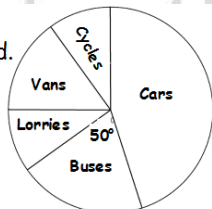


a. Which two types of vehicles were least common?

b. How many buses used the junction?

2. A sample of 15 workers from different professions are asked how many hours they work in a week. Results are shown:-

```
1 | 5  8
2 | 5  5  8
3 | 0  2  5  5  5
4 | 2  5  8
5 | 6  8
```
1 | 5 represents 15 hours     n = 15

a. Write down the modal number of hours worked.
b. Find the median number of hours worked.

3. The scores of a basketball team over a season lasting 15 games were

45  23  28  67  35  46  39  65  55  55  50  47  46  68  55

a. Find the range of scores.
b. Show this information in a stem and leaf diagram.
c. What is the modal score?
d. Find the median score.

## Thursday

1. 240 school pupils were asked to choose their favourite type of zoo animal. The results are shown in the pie chart.
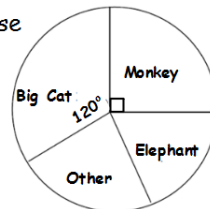


a. How mang people chose monkeys?

b. How many people chose big cats?

2. Two classes, 4A & 4B, sit the same German exam. Their marks are given in the back-to-back stem and leaf diagram below.

```
        4A          4B
      9 9 7 | 1 | 2 8
    6 6 6 5 | 2 | 4 9
  8 5 5 0 | 3 | 5 6 6 6
    5 5 1 | 4 | 0 1 4 8
    6 4 0 | 5 | 1 1 3 5 9
```
1 | 2  represents 12

a. Find the range of marks for class 4A.
b. What is the modal mark for class 4B.
c. Find the median mark for each class.
d. Overall, which class did better in the exam?

3. The waiting time, in minutes, of 15 people in a doctor's surgery are given below:

13  24  5  8  35  23  27  42  40  6  24  14  17  13  13

a. Show this information in a stem and leaf diagram.
b. What is the modal waiting time?
c. What is the median waiting time?

## S2 Daily Homework

## Week 28

### Monday

Solve the following equations:

1. $3(2x + 1) + 2(4x + 2) = 21$
2. $2(x + 2) + 3(x + 4) = 31$
3. $5(2x + 1) + 2(5x + 3) = 91$
4. $2(4x + 3) + 3(2x + 1) = 23$
5. $4(3x + 2) + 8(x + 1) = 56$
6. $5(2x + 1) + 2(x + 4) = 13$
7. $5(2x + 1) + 2(x + 3) = 71$
8. $3(x + 4) + 4(2x + 7) = 106$

### Tuesday

Solve the following equations:

1. $2(2x + 1) + 3(4x + 5) = 57$
2. $4(2x + 2) + 2(x + 4) = 41$
3. $2(4x + 6) + 3(2x + 5) = 22$
4. $3(8x + 12) + 2(6x + 7) = 14$
5. $6(x + 20 + 4(x – 3) = 50$
6. $4(2x + 2) + 2(x – 3) = 12$
7. $3(4x + 1) + 2(6x – 1) = 13$
8. $2(3x – 5) + 3(3x + 4) = 17$

### Wednesday

Solve the following equations:

1. $4(2x + 1) + 2(3x – 1) = 30$
2. $5(3x – 1) + 4(2x + 7) = 69$
3. $4(6x + 5) + 5(x – 3) = 92$
4. $3(2x + 3) + 2(4x – 1) = 21$
5. $4(x + 4) + 3(2x – 1) = 33$
6. $2(3x + 1) + 4(6x + 2) = 4$
7. $8(4x + 1) + 3(2x – 3) = 21$
8. $6(2x – 2) + 3(2x + 5) = 30$

### Thursday

Solve the following equations:

1. $3(2x + 2) + 4(3x + 1) = 16x + 28$
2. $5(3x + 1) + 2(2x + 3) = 18x + 24$
3. $4(2x + 3) + 3(2x + 5) = 10x + 45$
4. $8(x + 1) + 5(2x + 3) = 16x + 36$
5. $3(2x + 3) + 4(x – 2) = 3(3x + 7)$
6. $5(6x + 3) + 2(4x – 3) = 6(6x + 5)$
7. $3(x + 7) + 2(x – 4) = 4(x + 8)$
8. $6(x – 1) + 2(4x + 8) = 3(4x + 9)$

## S2 Daily Homework

**Monday**

Solve the following equations:
1. $3a + 4 = 2a - 7$
2. $7b + 3 = 4 - 5b$
3. $8 - 5c = 8c + 1$
4. $3(2d + 7) = 4(3d + 5)$

Write the following in scientific notation
5. 373,000
6. 0.00000673
7. 4.72 million

Write the following in full
8. $9.55 \times 10^5$
9. $1.19 \times 10^{-3}$

**Tuesday**

Solve the following equations:
1. $7a + 5 = 3a - 9$
2. $2b + 2 = 8 - 4b$
3. $21 - 3c = 7c + 1$
4. $3(4d + 2) = 2(5d + 1)$

Write the following in scientific notation
5. 8,380,000
6. 0.000000374
7. 13.9 million

Write the following in full
8. $8.37 \times 10^7$
9. $2.17 \times 10^{-5}$

**Wednesday**

Solve the following equations:
1. $8a + 2 = 5a - 13$
2. $9b + 5 = 7 - 4b$
3. $11 - 3c = 6c + 8$
4. $7(3d + 2) = 3(3d + 6)$

Write the following in scientific notation
5. 405,000
6. 0.00605
7. 0.56 million

Write the following in full
8. $3.03 \times 10^9$
9. $4.43 \times 10^{-7}$

**Thursday**

Solve the following equations:
1. $8a + 5 = 6a - 13$
2. $9b + 2 = 8 - 6b$
3. $10 - 4c = 7c + 14$
4. $7(5d + 3) = 4(4d + 3)$

Write the following in scientific notation
5. 14,040,000
6. 0.000000092
7. 92.43 million

Write the following in full
8. $3.301 \times 10^7$
9. $4.141 \times 10^{-2}$

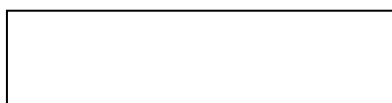S2 Daily Homework                    Week 30

**Monday**

Find the value of x when:
1.  5x + 3 = 4x + 7
2.  8x – 5 = 5x + 4
3.  2x + 7 = 8 + x
4.  7x +3 = 2x – 17
5.  2x + 9 = 5x – 6
6.  4x + 12 = 48 – 2x
7.  9x – 11 = 3x – 14
8.  6x – 14 = x + 3

**Tuesday**

Find the value of x when
1.  3x – 2 = 2x – 5
2.  4x + 3 = 2x + 15
3.  6x + 3 = 13 – 4x
4.  7x – 3 = 3x + 17
5.  4x – 8 = 6x + 12
6.  9x + 7 =  1 + 15x
7.  13x – 19 = 5x -15
8.  7x + 3 = 17 – 3x

**Wednesday**

Find the value of x when
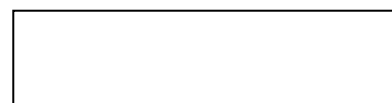1.  5x – 4 = 3x + 10
2.  6 + 8x = 2 + 10x
3.  3x – 9 = 7 + x
4.  6x – 12 = 4x + 14

5.  If the perimeter of this rectangle is 28cm make an equation and use it to find the value of x.

3x cm

5 cm

**Thursday**

Find the value of x when
1.  12x +11 = 4 + 5x
2.  19 – 8x = 2x – 11
3.  13x + 6 = 3x + 11
4.  17 – x  = 2x + 9

5.  If the perimeter of this rectangle is 34cm, find the length and the breadth.

2x + 3  cm

x – 1  cm

S2 Daily Homework                                    Week 31

**Monday**
1. Find 10% of £789

2. Find 15% of £978

3. Find 17.5% of £1080

4. Calculate $2^4$

5. Calculate $3^3$

6. Calculate $13^2$

7. If a car is bought for £5,500 and sold for £3,750, what is the percentage loss?

8. If a house is bought for £225,000 and sold for £375,000, what is the percentage profit?

**Tuesday**
1. Find 10% of £683

2. Find 15% of £874

3. Find 17.5% of £1240

4. Calculate $3^4$

5. Calculate $4^3$

6. Calculate $14^2$

7. If a car is bought for £12,400 and sold for £9,350, what is the percentage loss?

8. If a house is bought for £164,000 and sold for £189,000, what is the percentage profit?

**Wednesday**
1. Find 10% of £436

2. Find 15% of £764

3. Find 17.5% of £1940

4. Calculate $4^4$

5. Calculate $5^3$

6. Calculate $15^2$

7. If a car is bought for £9,820 and sold for £7,210, what is the percentage loss?

8. If a house is bought for £451,000 and sold for £500,500, what is the percentage profit?

**Thursday**
1. Find 10% of £624

2. Find 15% of £748

3. Find 17.5% of £1550

4. Calculate $5^4$

5. Calculate $6^3$

6. Calculate $16^2$

7. If a car is bought for £21,400 and sold for £16,350, what is the percentage loss?

8. If a house is bought for £376,450 and sold for £423,500, what is the percentage profit?

**Monday**
Solve the following equations:

1. $9x + 2(x + 7) = 36$
2. $3x + 4(2x - 3) = 10$
3. $6(3x + 2) = 4(4x + 7)$
4. $5(7x - 1) = 11(3x + 2)$
5. $3(9x + 4) = 5(5x + 4)$
6. $3(3x + 5) + 2(3x - 7) = 19$
7. $6(4x + 3) - 9(2x + 1) = 21$
8. $7(5x - 2) - 8(4x + 1) = 5$

**Tuesday**
Solve the following equations:

1. $3(8x + 2) - 4x = 36$
2. $2(3x + 5) - 3 = 16$
3. $7x + 6 = 2(3x + 2)$
4. $11x - 1 = 3(3x - 5)$
5. $4(5x - 1) = 3(4x + 12)$
6. $8(3x + 2) = 4(5x + 1)$
7. $2(3x + 8) - 3(x - 2) = 25$
8. $7(x - 1) - 2(x + 2) = 3$

**Wednesday**
Solve the following equations:

1. $3(x + 1) + 2(2x + 7) = 3$
2. $3(7x - 1) + 8(3 - 2x) = 1$
3. $4(x + 3) - 2 = 2$
4. $2x - 3(2 - x) = 4$
5. $5(3x - 4) = 8x + 1$
6. $8(x - 2) - 2(2x - 1) = 16$
7. $5(2x + 3) - 3(x + 1) = 5$
8. $3(2x + 5) + 5(x - 1) = -1$

**Thursday**
Solve the following equations:

1. $6(2x + 1) + 7 = 9x + 1$
2. $6(1 - x) + 4 = 2 - 3x$
3. $5x - 24 = 4(2x - 3) + 3(x + 1)$
4. $0 = 3(2 - 3x) - 7(x - 3)$
5. $2(x - 1) - 3(2 - x) + 4(1 - x) = 0$
6. $7 - 5(x - 2) = 5 - 3(x + 3)$
7. $15x = 3(x - 1) - 4(1 - x)$
8. $5(3 - x) - 3(5 - x) = 0$

# S2 Daily Homework  **<u>CALCULATOR</u>**                    Week 33

**Monday**
Express the following as percentages (2d.p.)
1. 43 out of 90
2. 57 out of 211

3. Find 71% of 570
4. Find 49% of 830
5. Calculate $2^3 \times 4$
6. Calculate $5 \times 3^3$
7. Calculate $\sqrt{169}$

Steve invests £380 in a bank account with an interest rate of 4% p.a.
How much would he have altogether after:

8. 1 year
9. 3 years

**Tuesday**
Express the following as percentages (2d.p.)
1. 28 out of 53
2. 98 out of 287

3. Find 61% of 840
4. Find 31% of 590
5. Calculate $5^3 \times 3$
6. Calculate $6 \times 4^3$
7. Calculate $\sqrt{225}$

Steve invests £510 in a bank account with an interest rate of 6.1% p.a.
How much would he have altogether after:

8. 1 year
9. 3 years

**Wednesday**
Express the following as percentages (2d.p.)
1. 74 out of 146
2. 112 out of 173

3. Find 21% of 740
4. Find 79% of 610
5. Calculate $7^3 \times 3$
6. Calculate $9 \times 6^3$
7. Calculate $\sqrt{196}$

Steve invests £670 in a bank account with an interest rate of 3.2% p.a.
How much would he have altogether after:

8. 1 year
9. 3 years

**Thursday**
Express the following as percentages (2d.p.)
1. 85 out of 220
2. 57 out of 211

3. Find 61% of 910
4. Find 49% of 4300
5. Calculate $8^3 \times 3$
6. Calculate $2 \times 9^3$
7. Calculate $\sqrt{144}$

Steve invests £940 in a bank account with an interest rate of 5.2% p.a.
How much would he have altogether after:

8. 1 year
9. 3 years

S2 Daily Homework                           Week 34

**Monday**

Factorise:

1. $3x + 12$
2. $4 - 6a$
3. $9x + 12y - 6$
4. $4a^3 + 5a^2 - 7a^5$
5. $15b^2 - 10b^5 + 35b^6$
6. $36x^2y^5 + 12x^7y - 6x^4y^5$
7. $14f^6g^5h^3 + 20f^2g^6h^7 - 8f^5g^5h^2$
8. $8r^2s^5t + 12r^7t - 20r^4s^5t$

**Tuesday**

Factorise:

1. $5x + 15$
2. $10 - 4a$
3. $8x + 4y - 12$
4. $4a^2 + 5a^7 - 7a^5$
5. $21b^4 - 14b^3 + 49b^2$
6. $25x^3y^2 + 10x^6y^3 - 15x^2y^8$
7. $6f^3g^2h^2 + 18f^4g^3h^5 - 9f^4g^3h^2$
8. $16r^5s^3t + 8r^2s^4t - 4r^3s^2t^2$

**Wednesday**

Factorise:

1. $8x + 16$
2. $8 - 12a$
3. $8x + 18y - 8$
4. $4a^2 + 5a^3 - 7a^6$
5. $12b^5 - 8b^3 + 16b^6$
6. $30x^6y^2 + 15x^3y^4 - 10x^3y^2$
7. $36f^3h^5 + 45f^4g^3h^7 - 18f^4g^2h^3$
8. $16r^3s^4t^3 + 64r^3st^4 - 8r^3s^2t^3$

**Thursday**

Factorise:

1. $9x + 27$
2. $6 - 14a$
3. $5x + 10y - 20$
4. $4a^2 + 5a^9 - 7a^3$
5. $20b^3 - 10b^5 + 50b^4$
6. $22x^2y^4 + 11x^3y^4 - 33x^2y^3$
7. $21f^3g^4h^2 + 28f^3g^7h^2 - 42f^3g^4h^4$
8. $13r^5s^2t^3 + 39r^3st^4 - 26r^2s^3t^9$

S2 Daily Homework                    Week 35

**Monday**
Calculate the area and circumference of a circle with:
1. Radius 4cm
2. Radius 5cm
3. Diameter 12cm
4. Diameter 14cm
Find the area and perimeter of
5. A semi-circle with diameter 8cm
6. A semi-circle with radius 9cm

**Tuesday**
Calculate the area and circumference of a circle with:
1. Radius 6cm
2. Radius 7cm
3. Diameter 18cm
4. Diameter 22cm
Find the area and perimeter of
5. A semi-circle with diameter 20cm
6. A semi-circle with radius 11cm

**Wednesday**
Calculate the area and circumference of a circle with:
1. Radius 8cm
2. Radius 12cm
3. Diameter 26cm
4. Diameter 32cm
Find the area and perimeter of
5. A semi-circle with diameter 14cm
6. A semi-circle with radius 26cm

**Thursday**
Calculate the area and circumference of a circle with:
1. Radius 5.2cm
2. Radius 9.3cm
3. Diameter 14.4cm
4. Diameter 36.8cm
Find the area and perimeter of
5. A semi-circle with diameter 50cm
6. A semi-circle with radius 60cm

# S2 Daily Homework                    Week 36

## Monday

1. Hazel's age is unknown. Her brother is treble her age and her sister is 9 years older. If the siblings have a combined age of 34 years, solve to find Hazel's age.

2. Trevor's age is unknown. His brother is 4 years younger and sister is double his age. If the siblings have a combined age of 24 years, solve the find Trevor's age.

3. £320 appreciates by 7 % each year. How much will there be after 5 years?

## Tuesday

1. Hazel's age is unknown. Her brother is double her age and her sister is 15 years older. If the siblings have a combined age of 39 years, solve to find Hazel's age.

2. Trevor's age is unknown. His brother is 2 years younger and sister is treble his age. If the siblings have a combined age of 33 years, solve the find Trevor's age.

3. £450 appreciates by 5.5% each year. How much will there be after 4 years?

## Wednesday

1. Hazel's age is unknown. Her brother is 4 years younger and her sister is 11 years older. If the siblings have a combined age of 25 years, solve to find Hazel's age.

2. Trevor's age is unknown. His brother is 7 years older and sister is treble his age. If the siblings have a combined age of 62 years, solve the find Trevor's age.

3. £690 appreciates by 3.25% each year. How much will there be after 6 years?

## Thursday

1. Hazel's age is unknown. Her brother is 4 times her age and her sister is 7 years older. If the siblings have a combined age of 79 years, solve to find Hazel's age.

2. Trevor's age is unknown. His brother is 13 years younger and sister is double his age. If the siblings have a combined age of 55 years, solve the find Trevor's age.

3. £810 appreciates by 9.02% each year. How much will there be after 7 years?

**Monday**
Calculate the area and circumference of a circle with:
1. Radius 4.2cm
2. Radius 5.7cm
3. Diameter 12.3cm
4. Diameter 14.7cm
Find the area and perimeter of
5. A semi-circle with diameter 8cm
6. A quarter-circle with radius 9cm

**Tuesday**
Calculate the area and circumference of a circle with:
1. Radius 8.1cm
2. Radius 3.2cm
3. Diameter 14.1cm
4. Diameter 16.07cm
Find the area and perimeter of
5. A semi-circle with diameter 20cm
6. A quarter-circle with radius 11cm

**Wednesday**
Calculate the area and circumference of a circle with:
1. Radius 8.9cm
2. Radius 12.34cm
3. Diameter 26.11cm
4. Diameter 32.16cm
Find the area and perimeter of
5. A quarter-circle with diameter 24cm
6. A quarter-circle with radius 32cm

**Thursday**
Calculate the area and circumference of a circle with:
1. Radius 7.97cm
2. Radius 1.11cm
3. Diameter 3.67cm
4. Diameter 79.46cm
Find the area and perimeter of
5. A quarter-circle with diameter 50.6cm
6. A quarter-circle with radius 60.4cm

S2 Daily Homework                    Week 38

**Monday**
For each statement write down and solve an equation to find the numbers:

1. Trebling a number and then taking away 5 gives the same result as doubling the number and then adding 2.
2. Multiplying a number by 5 and then adding 3 gives the same result as trebling the number and then adding 12.

3. If a box of sweets is divided among 24 children, they will get 5 sweets each. How many would each get, if the number of the children is reduced by 4?

**Tuesday**
For each statement write down and solve an equation to find the numbers:

1. Multiplying a number by 6 and then subtracting 4 gives the same result as doubling the number and then adding 20.
2. Multiplying a number by 3 and then subtracting 2 gives the same result as adding 17 to the number.

3. A farmer has enough food to feed 20 animals in his cattle for 6 days. How long will the food last if there were 10 more animals in his cattle?

**Wednesday**
For each statement write down and solve an equation to find the numbers:

1. When I add 4 to a number I get the same result as halving the number and adding 10.
2. I add 5 to a number and then treble my answer. This gives me the same result as adding 8 to the number and doubling my answer.

3. A contractor estimates that 3 persons could rewire Jasminder's house in 4 days. If, he uses 4 persons instead of three, how long should they take to complete the job?

**Thursday**
For each statement write down and solve an equation to find the numbers:

1. I subtract 2 from a number and then multiply my answer by 5. This gives the same result as adding 7 to the number and then trebling the answer.
2. I subtract 6 from a number and multiply my answer by 7. This gives the same result as subtracting 3 from the number and then multiplying by 4.

3. A factory requires 42 machines to produce a given number of articles in 63 days. How many machines would be required to produce the same number of articles in 54 days?