

Revision Exercise for 1st Form – 2015 [Please note that all topics covered in First Form are to studied in preparation for promotion examinations.]

1. Express the following numbers correct to the number of significant figures indicated in the brackets.

a) 46.93106 (2 s.f.)

b) 4537 (1 s.f.)

c) 0.06734 (1 s.f.)

d) 37.85672 (3 s.f.)

2. Calculate the value of the following.

a) $4\frac{7}{9} - 3\frac{11}{18}$

b) $10\frac{7}{9} + 6\frac{1}{3} + 5\frac{7}{18}$

c) $5\frac{1}{4} - 1\frac{2}{3} \div \frac{2}{5}$

d) $3\frac{3}{8} \times \left(8\frac{1}{2} - 5\frac{5}{6}\right)$

3. Calculate the exact value of the following.

a) $9.2 + 13.21 - 14.6$

b) $0.446 \div 8$

c) 0.07×0.0003

d) 0.047×0.66

4. Calculate the value of the following.

a) $(-1) + 5$

b) $(-8) - (+4) + (+7)$

c) $(-1) \times (+5)$

d) $(-3) \times 4$

e) $(-12) \div (-3)$

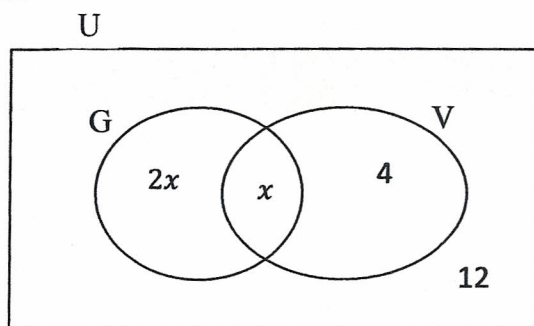
5. Convert the following to base 10.

a) 3512_8

b) 4132_5

c) 1011_2

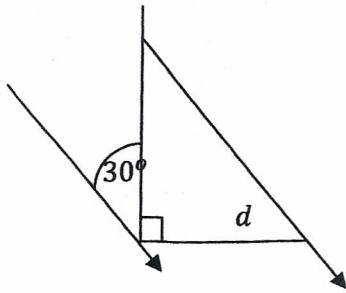
6. Convert
- 496_{10} to base 8
 - 375_{10} to base 5
 - 184_{10} to base 2
7. A vase of flowers contains 5 yellow ones, 3 red ones and 7 white ones. What fraction of the flowers in the vase are
- Red
 - Not white
 - Yellow
8. Solve the following equations.
- $15 = 1 + 7x$
 - $4 + 5x = -5$
 - $5 = 7x - 23$
 - $5x - 6 = 3 - 4x$
 - $6 - 2x = 9 - 5x$
 - $5x + 3 = -7 - x$
9. Given that $a = 4$, $b = 2$ and $c = -1$, find the value of
- $a - b + c$
 - $2a^b$
10. The Venn diagram below shows the number of students who play the guitar (G) or the violin (V) in a class of 40 students.



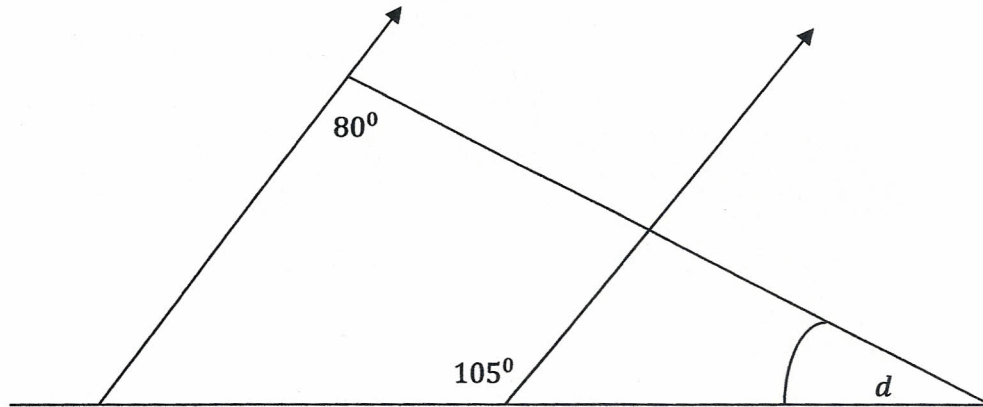
- Determine the value of $n(G \cup V)$.
- Write an equation, in terms of x , which represents the TOTAL number of students in the class.
- How many students play the guitar?

11. Find the size of each marked angle.

a)



b)



12. Draw a pie chart of radius 4cm to represent the following information. Work out the angles first.

A box of coloured marbles contains the following numbers of marbles of each colour.

Colour	Red	Yellow	Green	Blue	White
Number of marbles	16	22	10	7	5

13. Find the area and the perimeter of the following figure.

