# Number and Algebra Homework

## Rounding and Approximation



Key stage 3 mathematics

Level 5

1. Round these correct to two significant figures:

a) 128 b) 24 689 c) 398 d) 258 932 e) 1 487 566 f) 30 800

1. Round these correct to one significant figure:

a) 56 102 b) 348 c) 2074 d) 407 e) 5 099 999 f) 86 800

1. Round the numbers to one significant figure, and use the result to estimate the answer to each of these calculations.

a) 32 × 48 b) 499 × 21 c) 28 × 42 d) 480 × 28 e) 36 × 53

f) 5899 ÷ 56 g) 398 ÷ 18 h) 528 ÷ 12 i) 1928 ÷ 44 j) 108 ÷ 5

Level 6

1. Round each of these numbers to the given number of decimal places.

a) 14.827 (1 d.p.) b) 108.932 (1 d.p.) c) 2.0789 (2 d.p.)

d) 66.3328 (3 d.p.) e) 21.682 (2 d.p.) f) 24.308 (2 d.p.)

1. Round each of these numbers to the given number of significant figures.

a) 8.28792 (4 s.f.) b) 50.2351 (3 s.f.) c) 21.805 674 (3 s.f.)

d) 52.316 (4 s.f.) e) 23.3328 (3 s.f.) f) 0.008 026 (3 s.f.)

1. Arrange these in order of size, largest first:

12.01832 12.147 12.56 12.8 12.901 12.0087 12.98 12.01

1. Solve the equations by trial and improvement. Remember to show all your working. Stop when you have reached the required level of accuracy.

a) *x*² - *x* – 5 = 0, *x* = 3 (3 d.p.) b) *x*² - 10*x* + 23 = 0, *x* = 6 (2 d.p.)