Year 7 · Number: Powers, Primes and Proportions

Name: _____ Date: _____

Kia ora! This sheet gives you a good workout across whole numbers, powers of 10, primes, integers, fractions and percentages. Take your time, show your working, and check that each answer makes sense.

Warm-up

1. Write 10^4 as an ordinary number, then write 100 000 as a power of 10.

2. Work out 6^2 and $\sqrt{81}$.

3. Is 51 a prime or composite number? Explain.

4. What is the additive inverse of −7?

Practice

5. Write 47 208 in expanded form using powers of 10.

6. Find the highest common factor (HCF) of 48 and 60, and the least common multiple (LCM) of 6 and 8.

7. Use the order of operations (GEMA) to evaluate $3 + 4 \times (5^2 - 3)$.

8. Convert $\frac{5}{8}$ to a decimal and then to a percentage.

9. Aroha saved $186 for the holidays. She spent $\frac{2}{3}$ of her savings on a bike part. How much did she spend, and how much is left?

10. At Avondale College a netball club has 3 juniors for every 7 seniors. If there are 18 juniors, how many players are there altogether?

Challenge

11. At a market stall, 40% of the day's takings is $28. Find the full takings (100%), then work out 75% of that amount.

12. Add $2\frac{2}{3} + 1\frac{3}{4}$ and give the answer as a mixed number in its simplest form.