

YEAR 9 NUMERACY – SET 7

Answer these questions — you can use a calculator when you need to.

Name Date

The number of people waiting at the checkouts in a supermarket is counted once every hour. The results on Saturday were 4, 2, 11, 16, 14, 11, 5, 12, 6, 9.

Which of these statements is correct?

- 1
- The mean is 9 and the median is 10.
 - The median is 9 and the mode is 11.
 - The median is 11 and the mean is 9.
 - The mode is 11 and the median is 14.

At the start of 2009 the world price of sugar was 14 cents per pound. (A pound is a unit of weight — there are 2.2 pounds in a kilogram.) The world price of sugar rose by 60% during 2009.

- 2 Which calculation gives the world price of sugar **per kilogram** at the end of 2009?

$14 \times 0.6 \div 2.2$

$14 \times 1.6 \times 2.2$

$14 \times 0.6 \times 2.2 + 14$

$(14 \times 0.6 + 14) \div 2.2$

$5\frac{2}{3}$ is very close to the cube root of a whole number.

3

What is this number?

An octahedral die has its faces numbered from 1 to 8.

What is the probability of rolling a number less than 6 with this die?

4

$\frac{1}{8}$

$\frac{1}{6}$

$\frac{5}{8}$

$\frac{3}{4}$

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The value of a variable, k , is tripled and the result is then squared.

Which one of these expressions is correct?

5

$\sqrt{3k}$

$3k^2$

$\sqrt{3}k$

$9k^2$

The rim of a round mug with a radius of 4 cm has a blue stripe painted around it.

What is the length of the blue stripe (to the nearest centimetre)?

6

cm

The number of particles in the universe was estimated by one scientist to be 34^{56} .

Which of these numbers is equal to 34^{56} ?

7

$(34^{50})^6$

$34^{50} + 34^6$

$30^{56} \times 4^{56}$

$2^{56} \times 17^{56}$

If x , y and z are positive numbers and $x < y < z$, which one of these statements is **always** true?

8

$\frac{x}{y} < \frac{y}{z}$

$\frac{y}{z} < \frac{y}{x}$

$x + y < z$

$y < x - z$