## Year 9 Mathematics Exploring Numbers Practice Test 1

1 Find the value of
a) $-10+8$
b) $-3-5$
c) $6-15$

2 Find
a) $17+(-12)$
b) $-13-(-9)$
c) $-6-(-15)$

3 Find the value of
a) $-6 x-7$
b) $8 \times(-12)$
c) $(-6) \times 3$

4 Find the value of
a) $(-5)^{2}$
b) $(-2)^{3}$
c) $(-9)^{2}$

5 Find the value of
a) $-24 \div 8$
b) $-45 \div(-3)$
c) $16 \div(-2)$

6 Find the value of $9 x(-8)+(5-12)$.
7 Round each of the following to two decimal places
a) 256.1793
b) 0.04459
c) 4.8972

8 Round each of these numbers to two significant figures
a) 2567
b) 23067.453
c) 0.04059

9 Choose the rational numbers in the following list.

$$
\sqrt{9}, \sqrt{2}, 0.6, \pi-\frac{3}{4}
$$

10 Write $3 \frac{3}{8}$ as a decimal
11 Write $\frac{5}{13}$ as a recurring decimal
12 Write these decimals as fractions
a) 0.6
b) 0.24
c) 2.385

13 Simplify the ratio $38: 24$
14 Simplify these ratios
a) $0.2: 0.14$
b) $2 \frac{1}{2}: 1 \frac{1}{3}$

15 Simplify the ratio of 560 metres to 2 kilometres
16 Divide $\$ 300$ in the ratio $2: 3$
17 Write these rates in simplest form
a) 120 km every 3 hours
b) 5000 revolutions in $2 \frac{1}{2}$ minutes

18 A family took 3 hours to complete the 210 km from their home to their holiday house.
a) Find their average speed for the trip.
b) If they increased their average speed to $90 \mathrm{~km} / \mathrm{h}$, how many hours and minutes would the trip have taken?

19 Which is better value? 5 kg of potatoes for $\$ 3.80$ or 3 kg for $\$ 2.20$
20 The amount of fertiliser needed is directly proportional to the area of land being covered. A company claims that one 8 kg bag of its product covers $10 \mathrm{~m}^{2}$.How many kilograms would be needed to cover $25 \mathrm{~m}^{2}$ ?

## ANSWERS

Question 1
a) -2
b) -8
c) -9

Question 2
a) 5
b) -4
c) 9

Question 3
a) 42
b) -96
c) -18

Question 4
a) 25
b) -8
c) 81

Question 5
a) -3
b) 15
c) -8

Question 6 -79.
Question 7
a) 256.18
b) 0.04
c) 4.90

Question 8
a) 2600
b) 23000
c) 0.041

Question 9 Choose the rational numbers in the following list.

$$
\sqrt{9}, 0.6,-\frac{3}{4}
$$

Question $10 \quad 3.375$
Question 11 0.384615
Question 12
a) $\frac{3}{5}$
b) $\frac{6}{25}$
c) $2 \frac{77}{200}$

Question 13 19:12
Question 14
a) $10: 7$
b) $15: 8$

Question 15 7:25
Question 16 \$120 and \$180
Question 17
a) $40 \mathrm{~km} / \mathrm{h}$
b) 2000 revolutions/minute

Question 18
a) $70 \mathrm{~km} / \mathrm{h}$
b) 2 hours 20 minutes

Question 19 The 3 kg bag is better value
Question 2020 kg are needed for $25 \mathrm{~m}^{2}$

