

Name _____

Date _____

Stage 7 End-of-unit test 3 — mark scheme

22 questions · 33 marks · calculators are not allowed · allow about 45 minutes

- 1 Work out 3.7×10^3 . [1]

Answer: 3700

The digits move 3 places left: 3700.

- 2 Work out 0.39×10^5 . [1]

Answer: 39000

The digits move 5 places left: 39 000.

- 3 Work out $80\,000 \div 10^4$. [1]

Answer: 8

The digits move 4 places right: 8.

- 4 Work out $2\,350\,000 \div 10^5$. [2]

Answer: 23.5

The digits move 5 places right: 23.5.

- 5 Work out $45.6 \div 10^2$. [1]

Answer: 0.456

The digits move 2 places right: 0.456.

- 6 Write 10^6 as an ordinary number. [1]

Answer: 1000000

The index gives the number of zeros: 1 000 000.

- 7 A number multiplied by 10^3 gives 4500. What is the number? [2]

Answer: 4.5Divide to undo: $4500 \div 1000 = 4.5$.

- 8 Round 4.27 to 1 decimal place. [1]

Answer: 4.3

The hundredths digit is 7, so round up.

- 9 Round 3.146 to 2 decimal places. [1]

Answer: 3.15

The thousandths digit is 6, so round up.

- 10 Round 9.999 to 2 decimal places. [2]

Answer: 10

Rounding up carries all the way: 10.00, written 10.

- 11 Round 149.5 to the nearest whole number. [1]

Answer: 150

The digit after the units is 5, so round up.

- 12** Round 45 678 to 3 significant figures. [2]

Answer: 45700

The fourth digit is 7, so the third digit rounds up: 45 700.

- 13** Work out $8.46 \div 7$, giving your answer to 2 decimal places. [2]

Answer: 1.21

$8.46 \div 7 = 1.208\dots$, so 1.21.

- 14** Work out $7.62 \div 5$, giving your answer to 1 decimal place. [2]

Answer: 1.5

$7.62 \div 5 = 1.524$, so 1.5.

- 15** A number rounds to 6.7 to 1 decimal place. What is the smallest it could be? [2]

Answer: 6.65

Anything from 6.65 upwards rounds to 6.7.

- 16** A bag of rice weighs 25 kg. Write its mass in grams. [1]

Answer: 25000

$25 \times 1000 = 25\,000$ g.

- 17** A journey is 8460 m. Write it in kilometres. [1]

Answer: 8.46

$8460 \div 1000 = 8.46$ km.

- 18** Three friends share \$50 equally. How much does each get, to the nearest cent? Give the number of dollars. [2]

Answer: 16.67

$50 \div 3 = 16.666\dots$, so \$16.67.

- 19** Marcus says dividing by 10^4 always means crossing four zeros off the end. Is he right? [2]

☐ Yes, always

☐ No — only when the number ends in four zeros

Answer: No — only when the number ends in four zeros

$45 \div 10^4 = 0.0045$ has no zeros to cross off.

- 20** Work out $0.39 \times 10^5 \div 10^2$. [2]

Answer: 390

$39\,000 \div 100 = 390$.

- 21** A field is 38.6 m by 24.3 m. Work out its area to the nearest square metre. [2]

Answer: 938

$38.6 \times 24.3 = 937.98 \rightarrow 938$ m².

- 22** What is the largest whole number that rounds to 250 to the nearest ten? [1]

Answer: 254

255 would round up to 260.

Total: 33 marks