

## Topic test 1 Working with numbers

- Time allowed: 45 minutes.
- This test may be completed without the aid of a calculator.
- Part A: 20 multiple-choice questions (40 marks)
- Part B: 13 free-response questions (60 marks)

Name: \_\_\_\_\_

### Part A

20 multiple-choice questions  
2 marks each: 40 marks  
Circle the correct answer.

- 1  $0.1 \times 50 =$   
A 0.5                      B 1  
C 5                            D 10
- 2  $35 \times 4 =$   
A 170                        B 140  
C 130                        D 150
- 3  $80 \div 5 =$   
A 40                         B 4  
C 16                         D 1.6
- 4  $336 \div 16 =$   
A 16                         B 21  
C 26                         D 36
- 5  $44 \times 9 =$   
A 396                        B 400  
C 404                        D 200
- 6  $139 + 39 =$   
A 189                        B 179  
C 168                        D 178
- 7  $2 \times (-3)^2 =$   
A 18                         B -18  
C 36                         D -36
- 8  $2^3 =$   
A 25                         B 10  
C 32                         D 64
- 9 Between which two numbers does  $\sqrt{72}$  lie?  
A 8 and 9                    B 7 and 8  
C 5 and 6                    D 6 and 7
- 10  $18 - [20 + (7 - 12)] =$   
A -4                         B 22  
C 14                         D 12
- 11 If  $63 \times 28 = 1764$ , then what is the value of  $6.3 \times 0.28$ ?  
A 1.764                      B 17.64  
C 0.1764                     D 176.4
- 12  $14.35 - 6.1 =$   
A 8.3                        B 8.34  
C 8.25                      D 8.24
- 13  $76.5 \div 0.3 =$   
A 22.95                     B 255  
C 229.5                     D 25.5
- 14 Simplify  $\frac{16}{20}$   
A  $\frac{8}{15}$                         B  $\frac{3}{4}$   
C  $\frac{4}{5}$                          D  $\frac{1}{4}$
- 15  $27 \times 12 =$   
A 284                        B 294  
C 324                        D 314
- 16  $\frac{15}{6}$  as a mixed numeral is:  
A  $2\frac{2}{3}$                         B  $2\frac{5}{6}$   
C  $3\frac{1}{2}$                         D  $2\frac{1}{2}$
- 17  $(1.5)^2 =$   
A 22.5                      B 2.25  
C 30                         D 3
- 18  $\frac{2}{3} - \frac{2}{5} =$   
A  $\frac{1}{5}$                          B  $\frac{4}{15}$   
C  $\frac{1}{15}$                         D  $-\frac{1}{15}$
- 19  $\sqrt[3]{-27} =$   
A -9                         B -3  
C 9                            D 3
- 20  $\frac{4}{5} \div \frac{7}{10} =$   
A  $1\frac{1}{7}$                          B  $\frac{14}{25}$   
C  $\frac{35}{40}$                         D  $\frac{2}{5}$

## Topic test 1: Working with numbers continued

### PART B

13 free-response questions

60 marks

Show working where appropriate.

- 21 (12 marks) Evaluate:  
a  $18 \times 20$   
  
b  $35 + 18 + 42 + 65$   
  
c  $\frac{1}{2} \times 270$   
  
d  $3 \times 8 \times 5$   
  
e  $100 - 78$   
  
f  $0.25 \times 64$
- 22 (2 marks) Round 7.86353 correct to three decimal places.
- 23 (4 marks) Find the value of:  
a  $5^3$   
  
b  $\sqrt{49}$
- 24 (2 marks) Estimate the answer to  $47 \times 8 - 120$ . (Show working.)
- 25 (2 marks) Convert  $7\frac{1}{4}$  to an improper fraction.
- 26 (3 marks) Find  $27.08 \div 4$ .
- 27 (4 marks) Complete:  
 $16^2 = (2 \times \underline{\hspace{1cm}})^2$   
 $= 2^2 \times \underline{\hspace{1cm}}^2$   
 $= \underline{\hspace{1cm}} \times \underline{\hspace{1cm}}$   
 $= \underline{\hspace{1cm}}$ .
- 28 (12 marks) Evaluate:  
a  $-7 + 5 - 8$   
  
b  $3 + (-1) - (-4)$   
  
c  $4 + (-6) + 2$   
  
d  $(9 - 15) \times (-2)$   
  
e  $\frac{14 - 10}{4^2}$   
  
f  $18 \div 3 + 4 \times 2$

**Topic test 1: Working with numbers *continued***

29 (2 marks) Find  $\frac{5}{12} \times \frac{9}{20}$ .

30 (4 marks) Use a factor tree to find the value of  $\sqrt{576}$ .

31 (4 marks) Complete:

$$\begin{aligned}\sqrt{324} &= \sqrt{9 \times \underline{\quad}} \\ &= \sqrt{9} \times \sqrt{\underline{\quad}} \\ &= \underline{\quad} \times \underline{\quad} \\ &= \underline{\quad}.\end{aligned}$$

32 (4 marks) Find  $22.04 \times 9.5$ .

33 (5 marks) Bananas cost \$3.40 per kilogram. Sonja bought 1.3 kg of bananas.

a Calculate the total cost of Sonja's bananas, correct to the nearest 5 cents.

b Calculate Sonja's change if she pays for the bananas with a \$10 note.

**END OF TEST.**

Use the rest of the page and the back for extra working space.

**Topic test 1**

**Working with numbers**

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- Part B: 13 free-response questions (60 marks)

Name: \_\_\_\_\_

**Part A**

20 multiple-choice questions  
2 marks each: 40 marks  
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 C 5 D 10
- 2  $35 \times 4 =$   
A 170 B 140  
C 130 D 150
- 3  $80 \div 5 =$   
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A 16 B 21  
C 26 D 36
- 5  $44 \times 9 =$   
 A 396 B 400  
C 404 D 406
- 6  $139 + 39 =$   
A 189 B 179  
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- 14 Simplify  $\frac{16}{20} \times \frac{3}{5}$   
A  $\frac{8}{15}$  B  $\frac{3}{4}$   
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- 16  $\frac{15}{6}$  as a mixed numeral is:  
A  $2\frac{2}{3}$  B  $2\frac{5}{6}$   
C  $3\frac{1}{2}$   D  $2\frac{1}{2}$
- 17  $(1.5)^2 =$   
A 22.5 B 2.25  
C 30  D 3
- 18  $2\frac{2}{3} - \frac{3}{5} =$   
A  $\frac{1}{5}$  B  $\frac{4}{15}$   
 C  $\frac{1}{15}$  D  $-\frac{1}{15}$
- 19  $\sqrt[3]{-27} =$   
A -9 B -3  
C 9 D 3
- 20  $\frac{4}{5} + \frac{7}{10} =$   
A  $1\frac{1}{2}$  B  $\frac{14}{25}$   
C  $\frac{35}{40}$  D  $\frac{2}{3}$

**PART B**

13 free-response questions  
60 marks  
Show working where appropriate.

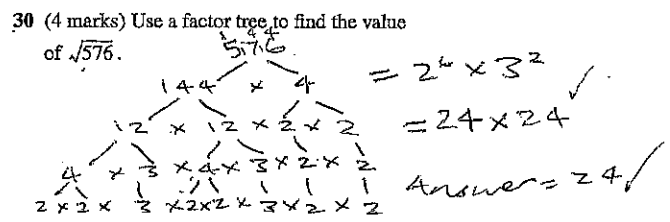
- 21 (12 marks) Evaluate:  
a  $18 \times 20 \times \frac{78}{20}$   
$$\begin{array}{r} 18 \times 20 \times \frac{78}{20} \\ 18 \times 78 \\ 1404 \end{array}$$
  
b  $35 + 18 \times 42 + 65$   
$$\begin{array}{r} 35 + 18 \times 42 + 65 \\ 35 + 756 + 65 \\ 856 \end{array}$$
  
c  $\frac{1}{2} \times 270$   
$$\frac{1}{2} \times 270 = 135$$
  
d  $3 \times 8 \times 5$   
$$3 \times 8 \times 5 = 120$$
  
e  $100 - 78$   
$$100 - 78 = 22$$
  
f  $0.25 \times 64$   
$$0.25 \times 64 = 16$$
- 22 (2 marks) Round 7.86353 correct to three decimal places.  
7.864
- 23 (4 marks) Find the value of:  
a  $5^3$   
 $5 \times 5 \times 5 = 125$   
b  $\sqrt{49}$   
7

- 24 (2 marks) Estimate the answer to  $(47 \times 8) - 120$ . (Show working)  
$$\begin{array}{r} 400 \\ 47 \times 8 = 376 \\ 376 - 120 \\ \hline 256 \end{array}$$
- 25 (2 marks) Convert  $7\frac{1}{4}$  to an improper fraction.  
$$7\frac{1}{4} = \frac{29}{4}$$
- 26 (3 marks) Find  $27.08 + 4$ .  
$$\begin{array}{r} 27.08 \\ + 4 \\ \hline 31.08 \end{array}$$
- 27 (4 marks) Complete:  
 $16^2 = (2 \times 8)^2$   
 $= 2^2 \times 8^2$   
 $= 4 \times 64$   
 $= 256$
- 28 (12 marks) Evaluate:  
a  $-7 + 5 - 8$   
$$-7 + 5 - 8 = -10$$
  
b  $3 + (-1) - (-4)$   
$$3 - 1 + 4 = 6$$
  
c  $4 + (-6) + 2$   
$$4 - 6 + 2 = 0$$
  
d  $(9 - 15) \times (-2)$   
$$(-6) \times (-2) = 12$$
  
e  $\frac{14 - 10}{42}$   
$$\frac{4}{42} = \frac{1}{10.5}$$
  
f  $18 \div 3 + 4 \times 2$   
$$6 + 8 = 14$$

**Topic test 1: Working with numbers *continued***

29 (2 marks) Find  $\frac{1}{4} \times \frac{3}{4}$

$$= \frac{1}{4} \times \frac{3}{4} = \frac{3}{16}$$



31 (4 marks) Complete:

$$\sqrt{324} = \sqrt{9 \times 36} = \sqrt{9} \times \sqrt{36} = 3 \times 6 = 18$$

32 (4 marks) Find  $22.04 \times 9.5$

$$\begin{array}{r} 22.04 \\ \times 9.5 \\ \hline 11020 \\ 19836 \\ \hline 209.380 \end{array}$$

33 (5 marks) Bananas cost \$3.40 per kilogram. Sonja bought 1.3 kg of bananas.

a Calculate the total cost of Sonja's bananas, correct to the nearest 5 cents.

$$\begin{array}{r} 1.3 \\ \times 3.40 \\ \hline 520 \\ 4080 \\ \hline 4.420 \end{array}$$

\$4.40

b Calculate Sonja's change if she pays for the bananas with a \$10 note.

$$\begin{array}{r} 10.00 \\ - 4.40 \\ \hline 5.60 \end{array}$$

\$5.60

**END OF TEST.**  
 Use the rest of the page and the back for extra working space.