1.1   Year 5 Math Screening Test Answers

1.2   Whole Numbers

1.2.1   Level A

Question 1 (1 mark each)

Write the following as ordinary numerals:

1. $(3 \times 1000) + (3 \times 10) + (3 \times 1) = \underline{3,033}$

2. $(5 \times 10000) + (5 \times 100) + (5 \times 10) = \underline{50,550}$

3. $(2 \times 100000) + (2 \times 1000) + (2 \times 1) = \underline{202,002}$

1.2.2   Level B

Question 2 (1 mark each)

What is the place value of 7 in the following numbers:

1.   217,102 = <u>7 thousands</u>

2.   154,710 = <u>7 hundreds</u>

3.   700,005 = <u>7 hundred-thousands</u>

1.2.3   Level C

Question 3 (1 mark each)

Find the values of the following equations:

1. $20018 - 19089 + 71 = \underline{1,000}$

2. $137 \times 26 + 26 \times 63 = \underline{5,200}$

3. $27 \div 9 \times 3 + 5 \times 6 = \underline{39}$

1.3 Fractions

1.3.1 Level A

Question 4 (1 mark each)

Simplify the following fractions:

1. $\dfrac{8}{1000} = \dfrac{1}{\underline{125}}$

2. $\dfrac{112}{128} = \dfrac{7}{\underline{8}}$

3. $\dfrac{118}{24} = 4\dfrac{11}{\underline{12}}$

1.3.2 Level B

Question 5 (1 mark each)

Change the following to equivalent fractions:

1. $\dfrac{2}{3} = \dfrac{\boxed{56}}{84}$

2. $\dfrac{3}{4} = \dfrac{\boxed{108}}{144}$

3. $\dfrac{3}{5} = \dfrac{75}{\boxed{125}}$

1.3.3 Level C

Question 6 (1 mark each)

Find:

1. $\dfrac{7}{12} + \dfrac{8}{48} = \dfrac{3}{\underline{4}}$

2. $1\dfrac{1}{12} - \dfrac{1}{6} = \dfrac{11}{\underline{12}}$

3. $2\dfrac{1}{5} \times 1\dfrac{2}{8} = 2\dfrac{3}{\underline{4}}$

4. $2\dfrac{1}{4} \div \dfrac{7}{8} = 2\dfrac{4}{\underline{7}}$

1.4   Decimals

1.4.1   Level A

Question 7 (1 mark each)

Change the following decimals to fractions:

1. $0.14 = \underline{\frac{7}{50}}$

2. $2.08 = \underline{2\frac{2}{25}}$

3. $0.125 = \underline{\frac{1}{8}}$

1.4.2   Level B

Question 8 (1 mark each)

Change the following fractions to decimals:

1. $\frac{27}{1000} = \underline{0.027}$

2. $\frac{1}{8} = \underline{0.125}$

3. $1\frac{3}{20} = \underline{1.15}$

1.4.3   Level C

Question 9 (1 mark each)

Find:

1. $\$12.30 + \$7.20 + \$125.60 = \underline{\$145.10}$

2. $13.6 \times 1.7 = \underline{23.12}$

3. $25.02 - 15.08 = \underline{9.94}$

1.5   Percentages

1.5.1   Level A

Question 10 (1 mark each)

Change the following fractions to percentages:

1. $\dfrac{17}{1000} = \underline{1.7\%}$

2. $\dfrac{16}{50} = \underline{32\%}$

3. $\dfrac{1}{20} = \underline{5\%}$

1.5.2   Level B

Question 11 (1 mark each)

Change the following percentages to fractions and write the answer in the simplest form:

1. $42\% = \underline{\frac{21}{50}}$

2. $125\% = \underline{1\frac{1}{4}}$

3. $0.5\% = \underline{\frac{1}{200}}$

1.5.3   Level C

Question 12 (1 mark each)

Find the percentages of the quantities Shown:

1. $35\% \; of \; \$150 = \underline{\$52.50}$

2. $125\% \; of \; \$80 = \underline{\$100.00}$

3. $12.5\% \; of \; 200 \; cars = \underline{25 \; cars}$
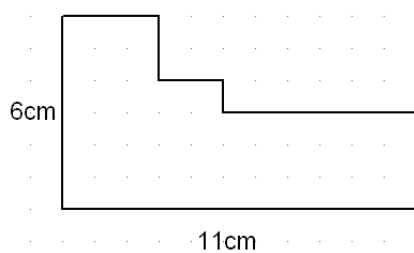
1.6 Measurement

1.6.1 Level A

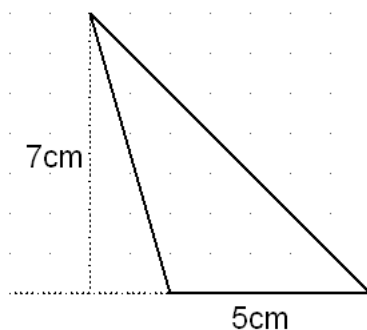**Question 13** (1 mark each)

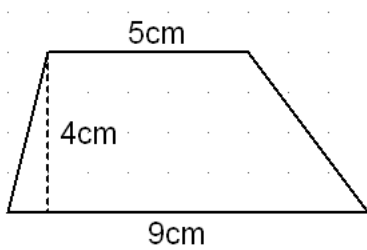Find the perimeter or areas of the following figures:

1.   Perimeter = <u>34cm</u>
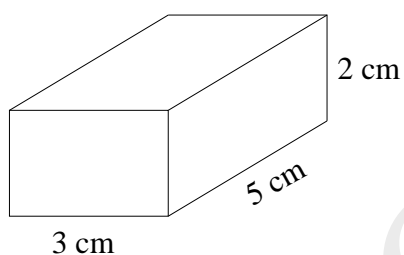

2.   Area = $\underline{17.5cm^2}$
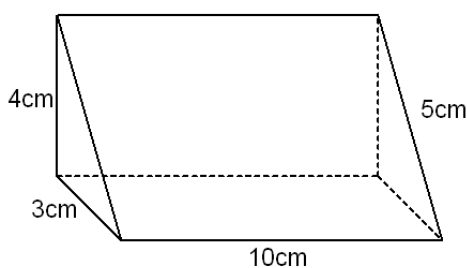

3.   Area = $\underline{28cm^2}$

1.6.2 Level B

Question 14 (1 mark each)

Find the volumes of the following figures shown below:

1.   Volume = $\underline{30cm^3}$

2.   Volume = $\underline{60cm^3}$

3.   Volume = $\underline{133cm^3}$
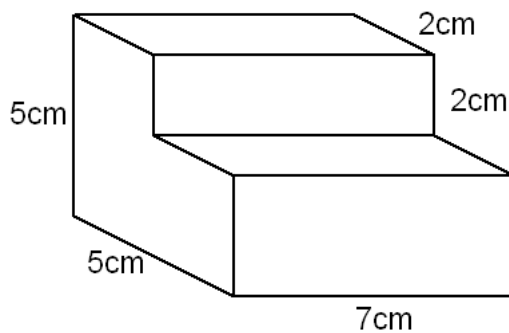
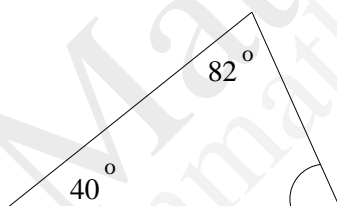### 1.6.3   Level C

Question 15 (1 mark each)

1. $6700g = \underline{6.7} \text{ kg}$

2. $4.95L = \underline{4950} \text{ ml}$
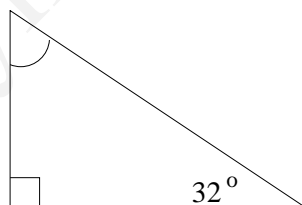
3. $423mm = \underline{0.000423} \text{ km}$

1.7   Geometry

1.7.1   Level A

Question 16 (1 mark each)

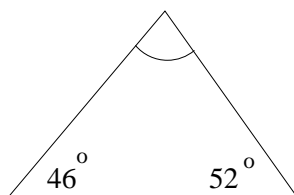Calculate the size of the unknown angle in the triangles below:

1. $\underline{x = 58^o}$
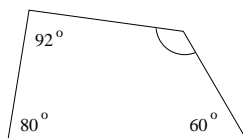

2. $\underline{x = 58^o}$

3. $\underline{x = 82^o}$
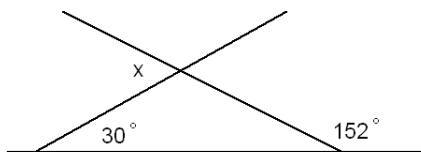
1.7.2 Level B

Question 17 (1 mark each)

Without using a protractor calculate the size of the unknown angle marked in the quadrilateral below:
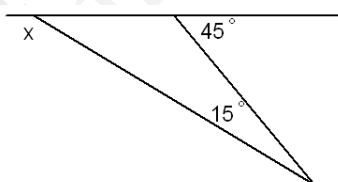
$x = 128^o$

1.7.3 Level C

Question 18 (1 mark each)

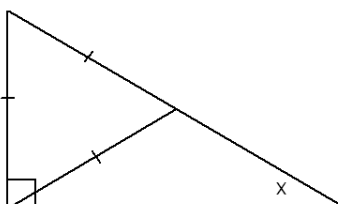Calculate the unknown angles **X** in the following figures:

1. $x = 58^o$

2. $x = 150^o$

3. $x = 30^o$

1.8   Shares and Graphs

1.8.1   Level A

Question 19 (2 marks each)

North Ryde public primary school students did a survey of the different colours of cars that passed close to their school. They recorded the information on the column graph below:
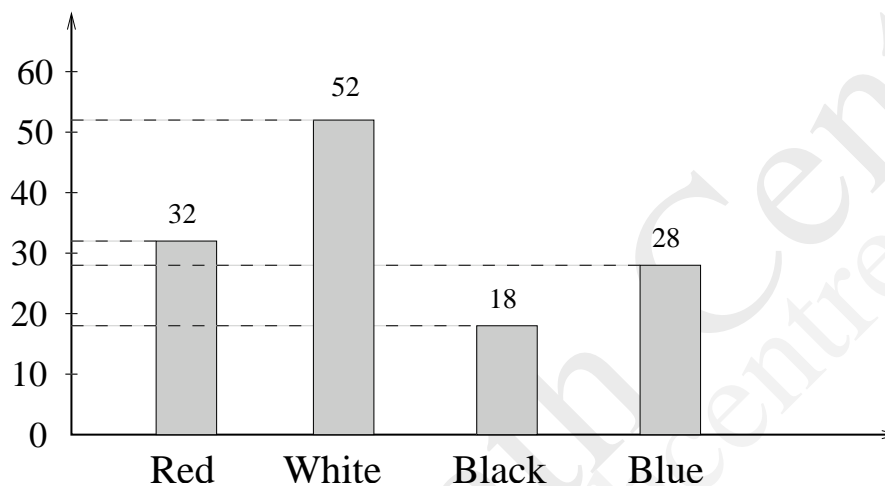
1. How many cars were recorded in the survey?

   Answer = 130 cars

2. What percentage were white?

   Answer = 40%

3. What was the difference between the most popular and the least popular?

   Answer = 34

1.8.2   Level B

Question 20 (2 marks each)

David made a sector graph to show how he spends his time in one day. Answer the following questions.
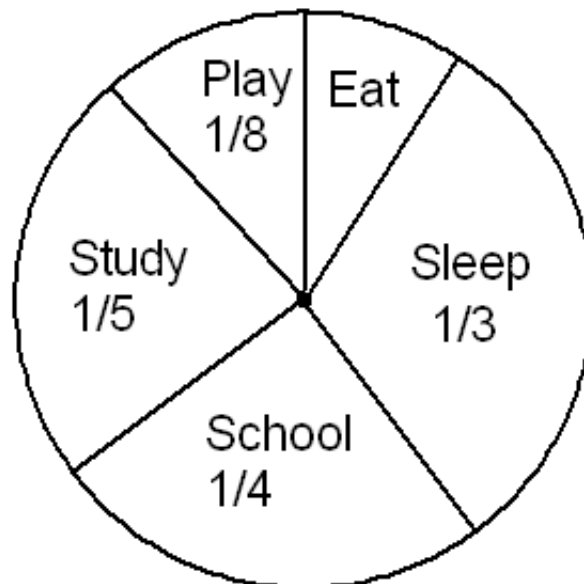
1. How many hours does he spend in school?

   Answer = 6 hours

2. How many hours does he play?

   Answer = 3 hours

3. How many hours does he study?

   Answer = $4\frac{4}{5}$

4. How many hours does he spend on eating? Answer = $2\frac{1}{5}$

1.8.3   Level C

Question 21 (2 marks each)

On Saturday, the number of people at different times at MYER store in the Macquarie Centre are shown in the graph below. Answer the following questions:
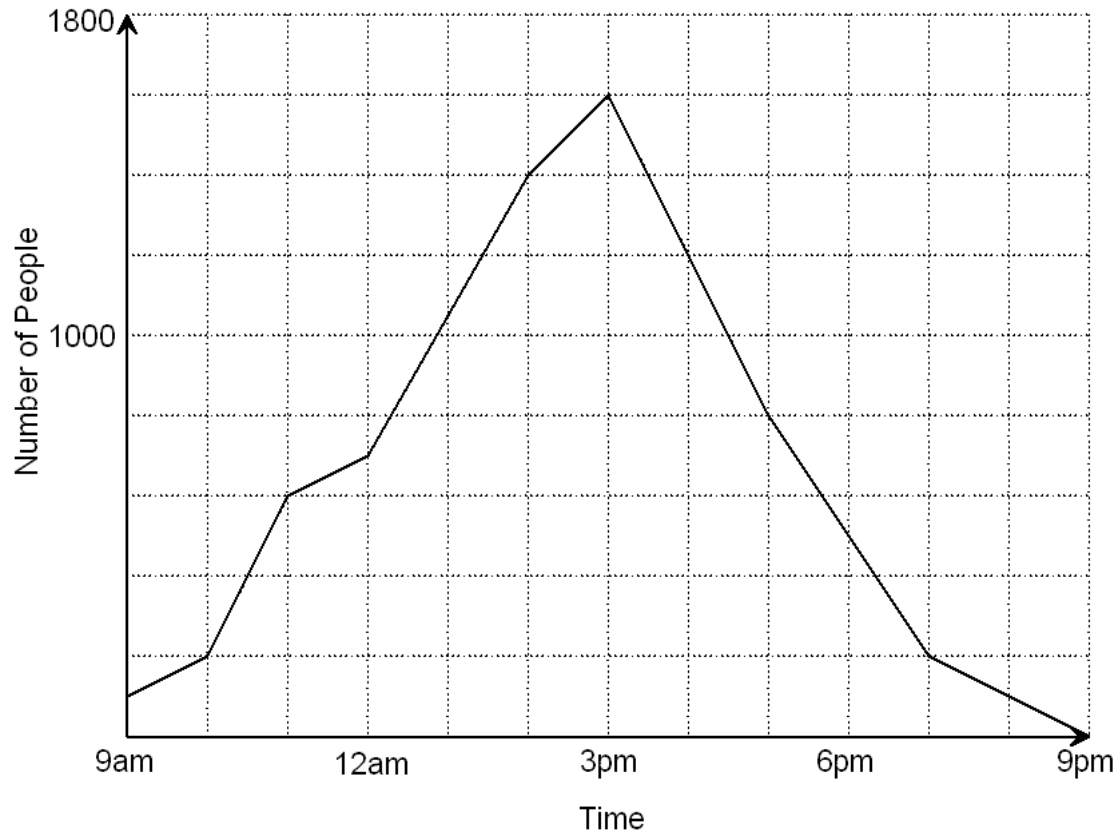
1. At what time were the maximum number of people in the store?

   Answer = 3 pm.

2. When the store opens how many people were in the store?

   Answer = 100 people.

3. Find the duration of time when there were more than 1400 people in the store.

   Answer = 2:00pm. to 3:30 pm.

1.9   Number Theory

1.9.1   Level A

Question 22 (1 mark each)

State whether the following numbers are prime or composite:

1.   Answer: 11 is a prime number.

2.   Answer: 21 is a composite number.

3.   Answer: 23 is a prime number.

1.9.2   Level B

Question 23 (1 mark each)

Which of the number below is divisible by 9?

1.   2131   No

2.   3654   Yes

3.   1926   Yes

1.9.3   Level C

Question 24 (1 mark each)

Think about the rule, and then write the next 3 numbers in the pattern below:

1.   1, 2, 4, 6, 18, 21, $84, 88, 440$

2.   5, 10, 11, 22, 24, $48, 51, 102$

3.   2, 6, 5, 15, 13, $39, 36, 108$

1.10   Problem Solving

1.10.1   Level A

Question 25 (2 marks each)

Mary went to the Sunday market and bought 3 coffee mugs at $1.75 each, a T-shirt for $9.75 and 5 second hand books at 45 cents each. How much charge is left over from $20.00?

Answer $= \$20.00 - 3 \times \$1.75 - \$9.75 - 5 \times \$0.45 = \$2.75$

1.10.2   Level B

Question 26 (2 marks each)

A group of students heights were: Jane 1.05 m, Joe 1.26m, Jenny 0.94m, and Gary 1.15m. What was their average height?

Answer $= (1.05 + 1.26 + 0.94 + 1.15) \div 4 = 1.1$m

1.10.3   Level C

Question 27 (2 marks each)

Fourteen people attended a meeting. If each person shook hands with every other person, How many handshakes were there altogether?

Answer $= 1 + 2 + 3 .... + 13 = 13 \times 6 + 13 = 91$

1.11   Maths Challenge

1.11.1   Level A

Question 28 (4 marks each)

A natural number N has a remainder of 3 when divided by 4 and also has a remainder of 4 when divided by 5. What is the smallest value of N can have?

Answer:

Multiples of 4: 4 , 8 , 12 , 16 , 20 , . . .

add remainder of 3: 7, 11, 15 , 19 , 23 , . . .

Multiples of 5: 5 , 10 , 15 , 20 , 25 , . . .

add remainder of 4: 9, 14 , 19 , 24 , 29 , . . .

$\therefore N = 19$.

1.11.2   Level B

Question 29 (4 marks each)

The cost of sunglasses and a case together is \$12. If the sunglasses cost \$10.5 more than the case, what is the cost of the sunglasses?

Answer: The case $= (12 - 10.5) \div 2 = 0.75$

so the sunglasses = 12 - 0.75 = \$11.25

1.11.3   Level C

Question 30 (4 marks each)

What is the sum of the first 50 even numbers?

Answer $= 2 + 4 + 6 + ... + 48 + 50 = (2 + 50) \times 12 + 50 = 650$