YR 10 — NON-CALCULATOR TEST   20 Marks

Name:_____   Teacher:_____

- Answer each question in the space provided
- Show any working in each question
- Each question is worth one mark
- Calculators may not be used

Question + working	Answer
1 $50 \times 700 =$	
2 What number is halfway between −2 and 4?	
3 $\frac{2}{3} \times 1\frac{1}{4} =$	
4 Find 15% of 3 metres.	
5 Find the value of $\dfrac{18+18}{18-9}$	
6 Verity left home at 7:43am to travel to work. Her trip takes 57 minutes. What time does she get to work?	

NS 4.1.4.3

7	Write a number in the box to give the expression a value between 1 and 2 $\dfrac{\boxed{} + 3}{8}$	
8	Find the sum $1+3+17+19+1+3+17+19+1+3+17+19$	
9	Prudence thought of a number. After she doubled the number and subtracted 5 the result was 33. What was the number she first thought of?	
10	What is the greatest number of 40¢ chocolates that Constance can buy with $7?	
11	Faith has 43 smarties, Hope has 27 and Charity has 14. Faith wants to share them equally. How many does Faith have to give away so that all three girls have the same number of smarties?	

NS 4.1.4.3

12   Write an algebraic expression for '2 less than three times x'

13   Evaluate the expression $3a^2b$ when $a = -1$ and $b = 2$

14   Which number in the box is:

Smaller than 420
AND greater than 220
AND odd
AND divisible by 9?

450	351
	403
324	354

15   Using all of the numbers and all of the symbols below, write a correct number sentence.

$1, 3, 4, 8, +, -, =$

16   In the following sequence of numbers:

-7, 5, 1, 13, 9, 21, 17, _____, 25, 37, ...

The missing number is:...........................

17   Put the SAME number in the two boxes so that the statement is true:

$$\boxed{} \times \boxed{} = 27 \times 3$$

18   The following pattern can be worked out for perfect squares:

$1^2 = 1$
$2^2 = 1 + 3$
$3^2 = 1 + 3 + 5$
$4^2 = 1 + 3 + 5 + 7$

What is the expression for 9^2 ?

19   Write down the smallest fraction you can make with the following numbers:
3, 5, 11

$$\boxed{ \over }$$

20 $x^3 + x^3 = $ ....

NON-CALCULATOR TEST   20 Marks

Name:....Emily Chen............   Teacher:..Hx..Maitland........

- Answer each question in the space provided
- Show any working in each question
- Each question is worth one mark
- Calculators may not be used

NS 4.1-4.3

Question + working	Answer
1 $50 \times 700 = $ 35 000	35 000
2 What number is halfway between −2 and 4? 1 −2 −1 0 1 2 3 4	1
3 $\frac{2}{3} \times 1\frac{1}{4} = \frac{2}{3} \times \frac{5}{4}$ $= \frac{10}{12}$ $= \frac{5}{6}$	$\frac{5}{6}$
4 Find 15% of 3 metres 0.15×300cm 45cm $\begin{array}{r} 300 \\ \times 0.15 \\ \hline 1500 \\ 300 \\ \hline 4500 \end{array}$	45cm
5 Find the value of $\frac{18+18}{18-9} = \frac{36}{9}$ $= \frac{9}{81}$ $= 9$	9
6 Verity left home at 7:43am to travel to work. Her trip takes 57 minutes. What time does she get to work? $\begin{array}{r} 60 \\ -43 \\ \hline 17 \end{array}$ $\begin{array}{r} 57 \\ -17 \\ \hline 40 \end{array}$ 8:40	8:40am
7 Write a number in the box to give the expression a value between 1 and 2 $\frac{\boxed{6}+3}{8}$	NS 4.1-4.3
8 Find the sum $\underbrace{1+3}_{20}+\underbrace{17+19}_{20}+\underbrace{1+3}_{20}+\underbrace{17+19}_{20}+\underbrace{1+3}_{20}+\underbrace{17+19}_{20}$	120
9 Prudence thought of a number. After she doubled the number and subtracted 5 the result was 33. What was the number she first thought of? $2a - 5 = 33$ $2a = 38$ $a = 19$	19
10 What is the greatest number of 40¢ chocolates that Constance can buy with $7? $\begin{array}{r} 17 \\ 40\overline{)70¢} \\ \underline{4} \\ 30 \\ \underline{28} \\ 2 \end{array}$	17
11 Faith has 43 smarties, Hope has 27 and Charity has 14. Faith wants to share them equally. How many does Faith have to give away so that all three girls have the same number of smarties? F H C 43 27 14 30 27 27 28 28 28 $\begin{array}{r} 27 \\ -14 \\ \hline 13 \end{array}$ $\begin{array}{r} 43 \\ 27 \\ +14 \\ \hline 84 \end{array}$ $\begin{array}{r} 28 \\ 3\overline{)84} \\ 24 \end{array}$ $\begin{array}{r} 43 \\ -28 \\ \hline 15 \end{array}$	15

12   Write an algebraic expression for '2 less than three times x'

$$3x - 2$$

PAS 4.1-4.3

13   Evaluate the expression $3a^2b$ when $a = -1$ and $b = 2$

$$3 \times (-1)^2 \times 2$$
$$3 \times 1 \times 2 = 6$$

6

NS 4.1-4.3

14   Which number in the box is:

Smaller than 420
AND greater than 220
AND odd
AND divisible by 9?

450   (351)
(403)
324   354

351

15   Using all of the numbers and all of the symbols below, write a correct number sentence.

$1, 3, 4, 8, +, -, =$

$$8 - (3 + 4) = 1$$
$$4 + 3 = 8 - 1$$

$4 + 3 = 8 - 1$

PAS 4.1-4.3

16   In the following sequence of numbers:

-7, 5, 1, 13, 9, 21, 17, __29__ , 25, 37, ...

The missing number is:......29.............

29

17   Put the SAME number in the two boxes so that the statement is true:

$$\boxed{9} \times \boxed{9} = 27 \times 3$$

$$\begin{array}{r} 27 \\ \times 3 \\ \hline 81 \end{array}$$

9

NS 4.1-4.3

18   The following pattern can be worked out for perfect squares:

$1^2 = 1$
$2^2 = 1 + 3$
$3^2 = 1 + 3 + 5$
$4^2 = 1 + 3 + 5 + 7$

What is the expression for 9^2?

$$1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17$$

PAS 4.1-4.3

19   Write down the smallest fraction you can make with the following numbers:
3, 5, 11

$$\frac{3}{11}$$

20 $x^3 + x^3 = ...2x^3...............$

$2x^3$

4