Numeracy Practice Tests 1, 2 and 3
Calculator and Non-calculator
Year 7

Numeracy Practice Tests are designed to assist with preparation for NAPLAN

TEACHER BOOK
You have 40 minutes to complete this test.

You are allowed to use a calculator.

You should use a pencil to write your answers or shade in the bubble.

If you make a mistake, rub it out thoroughly.

The following test has been designed by 3P Learning to prepare students for the National Assessment Program Numeracy Test. This test is to be used for revision purposes only. 3P Learning does not guarantee that the format of this test is the same as an actual test.
1. Multiply 4016 by 72

- 298 152
- 295 632
- 611
- 289 152

2. How many more white cars than silver cars are in the car park?

- green: 3
- red: 4
- white: 5
- blue: 6
- silver
- other

3. 20 = 60

What sign is needed to make this number sentence true?

- −
- +
- ×
- +

4. You scored 15 out of 20 in a test. What was your percentage?

- 75%
- 80%
- 15%
- 30%
5. What is the perimeter of this shape?

6. Jenna runs at a speed of 6 km per hour. How long would it take her to run 3 km?

7. Which is the coldest temperature?
8. You are asked to create a sequence of numbers starting with 0.5 and counting up by 0.25 each time.

Which of the following is your sequence?

- 0.5, 0.7, 0.9, 1.1
- 0.5, 0.75, 1.00, 1.25
- 0.25, 0.5, 0.75, 1.00
- 5.0, 5.25, 5.5, 5.75

9. You need to catch a bus at 11.50 am. You know you have 20 minutes before you need to leave. What time is it?

- Shade one bubble.

10. The chance of getting a number higher than 6 on a regular die is:

- Likely
- Certain
- Unlikely
- Impossible

11. 14.06 – 4.56 = 9. 8 4 6

Write one digit in each box.
This table shows Rina’s fitness program for the week:

<table>
<thead>
<tr>
<th>DAY</th>
<th>SESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>40 minutes of running</td>
</tr>
<tr>
<td>Tuesday</td>
<td>40 minutes of walking</td>
</tr>
<tr>
<td>Wednesday</td>
<td>30 minutes of swimming</td>
</tr>
<tr>
<td>Thursday</td>
<td>20 minutes of interval training</td>
</tr>
<tr>
<td>Friday</td>
<td>20 minutes of stretching</td>
</tr>
</tbody>
</table>

What was the average (mean) time for the training sessions?

50 minutes 30 minutes 20 minutes 40 minutes

Find the size of $x$.

$x = 84°$

What is the next number in this sequence?

5.8 6.2 6.4 6.8
15. Kelly bought an autographed football shirt for $150. The value of the shirt increased by 10%. What is the shirt now worth?

$160 $165 $170 $175

16. This plan shows the seating for a cinema.

Sam enters the movie theatre at the arrow. She turns left at the beginning of the third row from the back and then facing the screen she moves across two seats to her left. Which seat does she sit in?

C2 C3 D3 D2

17. A rectangle has an area of 16 cm\(^2\). If one side is 8 cm the other side is

4 cm 8 cm 2 cm 1 cm

18. 0.7, 1.3, ?, 2.5, 3.1

What number is missing from this sequence?

1.6 1.9 2.1 2.4
19. The area of this shape is closest to:

![Heart Shape Diagram]

- **8 cm^2**
- **12 cm^2**
- **14 cm^2**
- **16 cm^2**

Shade one bubble.

20. Lani had a box of apples. She shared out the apples equally to 6 of her friends. Each person was given 4 apples and there were none left in the box. How many apples were in the box?

- **48**
- **24**
- **12**
- **6**

Shade one bubble.

21. In a room of 30 people, \( \frac{1}{6} \) of them did not wear a watch. How many people were wearing a watch?

- **25**

Write one number in the box.

22. A school has a total of 250 students. Two-fifths always buy their lunch from the canteen. How many students is this?

- **27**
- **100**
- **50**
- **25**

Shade one bubble.
23 A timetable for buses between town X and town Y is shown.

<table>
<thead>
<tr>
<th>Bus</th>
<th>Early</th>
<th>Late</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leave X</td>
<td>7:12 am</td>
<td>8:32 am</td>
</tr>
<tr>
<td>Arrive Y</td>
<td>7:52 am</td>
<td>9:42 am</td>
</tr>
</tbody>
</table>

How much longer does the late bus take to travel between town X and town Y?

30 minutes

24 What is the volume of this rectangular prism?

Diagram not drawn to scale

\[ V = l \times w \times h = 3 \times 6 \times 4 = 72 \text{ cm}^3 \]

25 Which of these angles is closest to 45°?

Shade one bubble.
26. Martine bought a ham sandwich and a muesli bar for lunch from the canteen. What other item could she buy with the change she gets from $5.00?

<table>
<thead>
<tr>
<th>Canteen Price List</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ham sandwich</td>
<td>$2.80</td>
</tr>
<tr>
<td>Salad sandwich</td>
<td>$2.60</td>
</tr>
<tr>
<td>Muesli bar</td>
<td>$1.40</td>
</tr>
<tr>
<td>Fruit juice</td>
<td>$1.10</td>
</tr>
<tr>
<td>Oranges/apples</td>
<td>80c</td>
</tr>
</tbody>
</table>

- Orange or apple
- Fruit juice
- Muesli bar
- Salad sandwich

Shade one bubble.

27. Tim started his homework at 4:23 pm and finished it at 6:20 pm. How long did he spend doing his homework?

- 2 hours and 3 minutes
- 1 hour and 3 minutes
- 1 hour and 57 minutes
- 2 hours and 43 minutes

Shade one bubble.

28. In the diagram arrow D is pointing south.

Which direction is arrow A pointing in?

- North
- South
- East
- West

Shade one bubble.
29. Tick (✔) the row that has the pair of numbers that makes this number sentence correct.

\[ \star + \boxdot = 5 \]

<table>
<thead>
<tr>
<th>Tick a row</th>
<th>5</th>
<th>−10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>−12</td>
<td>7</td>
</tr>
<tr>
<td>✔</td>
<td>−7</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>5</td>
</tr>
</tbody>
</table>

30. \[ 3.9 + 15 + 4 \frac{2}{5} = \]

Write the answer in the box.

= 23.3

31. Lim puts 9 lollies in each of 18 lolly bags. He has 6 lollies left over.

How many more lollies does he need to be able to put 10 in each bag?

Write the answer in the box.

= 12

32. Rachel and Simon are facing each other. If Simon turns 90° in a clockwise direction, who is he facing now?

Shade one bubble.

Ainslie

Rachel

Simon

Gen

Arie

Dan

END OF TEST
Numeracy Practice Test
Year 7 – Answers

Practice Test 1 – Non-calculator

Student Details

First Name

Last Name

Today’s Date is: __________________

Test Instructions

You have 40 minutes to complete this test.

You are **NOT allowed** to use a calculator.

You should use a pencil to write your answers or shade in the bubble.

If you make a mistake, rub it out thoroughly.

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The following test has been designed by 3P Learning to prepare students for the National Assessment Program Numeracy Test. This test is to be used for revision purposes only. 3P Learning does not guarantee that the format of this test is the same as an actual test.
1. Twenty seven thousand three hundred and fifty six is:

- 27 350
- 27 356
- 2 756
- 270 356

Shade one bubble.

2. The number of cupcakes sold at a cake stall is shown below.

<table>
<thead>
<tr>
<th>Number of cupcakes sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key</td>
</tr>
<tr>
<td>= 10</td>
</tr>
<tr>
<td>Chocolate</td>
</tr>
<tr>
<td>Vanilla</td>
</tr>
<tr>
<td>Strawberry</td>
</tr>
<tr>
<td>Blueberry</td>
</tr>
</tbody>
</table>

What is the total number of cupcakes sold?

- 95
- 10 1/2
- 100
- 105

Shade one bubble.

3. 20 out of 50 as a percentage is:

- 40%
- 60%
- 20%
- 50%

Shade one bubble.
4. How many vertices does this prism have?

A teacher gathered information from 40 students about who wears glasses. Write the missing number in the blank space in the table below.

A teacher gathered information from 40 students about who wears glasses. Write the missing number in the blank space in the table below.

<table>
<thead>
<tr>
<th>Always wear glasses</th>
<th>Sometimes wear glasses</th>
<th>Never wear glasses</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOYS</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>GIRLS</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Write your answer in the box.

6. Akhil’s pet snail travels at 15 cm per minute. How far will his snail travel in 8 minutes?

<table>
<thead>
<tr>
<th>120 cm</th>
<th>70 cm</th>
<th>85 cm</th>
<th>150 cm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Which is the best way to estimate the total of this bill?

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 drink</td>
<td>$4.90</td>
</tr>
<tr>
<td>1 hamburger</td>
<td>$7.30</td>
</tr>
<tr>
<td>1 bowl french fries</td>
<td>$5.05</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
</tr>
</tbody>
</table>

$$5.00 + 7.00 + 5.00$$
$$5.00 + 7.00 + 6.00$$
$$5.00 + 6.00 + 5.00$$
$$4.00 + 7.00 + 5.00$$

The spinner is used to decide what prize is won. What is the chance that the arrow will point to an iPod?

- Impossible
- Fifty-fifty
- Certain
- Two out of eight

Which of these nets could you use to make a triangular prism?

- 
- 
- 
- 
- 
- 
- 
- 

Shade one bubble.
10. Grace is travelling from A to B to C. What direction does she travel?

- North then East
- East then South
- North then West
- East then North

11. Dan made a pattern with matchsticks. Complete the table:

<table>
<thead>
<tr>
<th>Number of squares</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of matchsticks</td>
<td>4</td>
<td>7</td>
<td>10</td>
<td>13</td>
<td>16</td>
</tr>
</tbody>
</table>

12. The nearest whole number to 67.78 is:

- 60
- 67
- 68
- 70

Shade one bubble.
13 What was the maximum temperature on Monday?

Shade one bubble.

![Maximum Temperature graph]

15 ºC 10 ºC 11 ºC 13 ºC

14 \( \frac{1}{6} \) of 36 = 

Write your answer in the box.

6

15 The time on this clock is:

Shade one bubble.

8:15 2:40 8:05 3:20
16. Write the letters A, B, C, D to order these marked angles from smallest to largest.

Write one letter in each box.

17. How long will it take to drive 100 km at a speed of 75 km an hour?

Shade one bubble.

65 minutes  75 minutes  100 minutes  80 minutes

18. What is the perimeter of this shape?

Shade one bubble.

30 cm  31 cm  36 cm  26 cm
19. \( \frac{3}{4} = \frac{?}{4} \)

The missing number is:

- 7
- 5
- 4
- 13

20. \( 40 - 4 = 2 \times \square \)

Write your answer in the box. 18

21. 3 equal bags of flour weigh 1.2 kg in total. What is the weight of one bag of flour?

- 4 000 grams
- 300 grams
- 1 200 grams
- 400 grams
22. Which one of the solids below is not the same as this solid?

A  
B  
C  
D  

23. Sean’s pocket money of $20 is increased by 30%.
   
   His new allowance is:
   
   $23  
   $26  
   $20.30  
   $30  

24. Line C and which other line make up an angle closest to 45° when they meet?

A  
B  
C  
D  

Shade one bubble.
25. A person is about to buy a ticket to the circus. The distance between the tree and the ticket booth is 30 metres. Estimate the distance between where the person is standing and the ticket booth.

- 5 metres
- 10 metres
- 15 metres
- 20 metres
- 30 metres

26. Sam starts with a number. She multiplies it by 2 and then subtracts 4. The answer is 10. What number did she start with?

- 5
- 7
- 15
- 24

27. Out of 56 students, half get lunch orders and 20 students bring their lunch to school everyday. How many students sometimes get lunch orders and/or sometimes bring in their lunch?

- 4
- 6
- 8
- 10
28. 8, 16, 32, 64, ?, ?

What are the next two numbers in this pattern?

- 126 and 158
- 126 and 160
- 128 and 260
- 128 and 256

Shade one bubble.

29. How many horizontal lines are in this drawing?

How many horizontal lines are in this drawing?

Write your answer in the box.

29

30. Which clock shows 17:30?

Which clock shows 17:30?

Shade one bubble.
31 65, 50, 45, 30, 25 ....

This rule can be described as:

☐ Add 5 then add 15
☐ Double the previous number then subtract 70
☒ Subtract 15 then subtract 5
☐ Subtract 15 then subtract 10

32 Some water was heated and then left to cool down.

How long did it take to reach 30º?

30 minutes
Numeracy Practice Test
Year 7 – Answers

Practice Test 2 – Calculator allowed

Student Details

First Name

Last Name

Today’s Date is: ____________________

Test Instructions

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1. Here is a number pattern.

12 \times 66 = 792
24 \times 66 = 1584
36 \times 66 = 2376
48 \times 66 = 3168
\square \times 66 = 3960

What is the missing number?

- 60
- 72
- 84
- 96

2. The number of people moving out of a country town over 4 years is shown below.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population Leaving Appleton</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>15000</td>
</tr>
<tr>
<td>2004</td>
<td>15000</td>
</tr>
<tr>
<td>2005</td>
<td>15000</td>
</tr>
<tr>
<td>2006</td>
<td>15000</td>
</tr>
</tbody>
</table>

The total number of people who have moved over the years is:

- 15 000
- 20 000
- 22 000
- 25 000
3. \((6 \times 12) + (51 \times 10) + (7 \times 8) + (7 \times \frac{1}{10}) + (8 \times \frac{2}{100})\) is equal to:

- 63.886
- 638.65
- 638.86
- 6388.6

4. The length of this car is 4.79 metres.
How long is this car to the nearest metre?

- 4.8 metres
- 4 metres
- 5 metres
- 4.5 metres

5. \(1^3 + 2^3 + 3^3 + 4^3 + 5^3 =\)

- 225
- 625
- 500
- 525

6. A length of ribbon 3.6 metres long is cut into pieces that are 0.06 long. How many pieces of ribbon can be cut?

- 60
7. How many cards are the same as \( \frac{3}{4} \)?

- \( \frac{1}{3} \)
- \( 25\% \)
- \( 0.75 \)
- \( 50\% \)
- \( 0.25 \)
- \( \frac{7}{5} \)
- \( 75\% \)
- \( \frac{6}{8} \)
- \( \frac{8}{16} \)

Shade one bubble.

8. Which letter does not have a line of symmetry?

- A
- T
- N
- E

Shade one bubble.

9. How many of these numbers are not multiples of 8?

- 64
- 27
- 88
- 44
- 48
- 16
- 80
- 32
- 52
- 72
- 56

Shade one bubble.
The maximum daily temperatures in Paris and New York were recorded over a week in January.

<table>
<thead>
<tr>
<th></th>
<th>Sun</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paris</td>
<td>2</td>
<td>2</td>
<td>-1</td>
<td>1</td>
<td>4</td>
<td>-3</td>
<td>-2</td>
</tr>
<tr>
<td>New York</td>
<td>-4</td>
<td>-3</td>
<td>0</td>
<td>1</td>
<td>-1</td>
<td>-2</td>
<td>2</td>
</tr>
</tbody>
</table>

On which day is the greatest difference in temperature?

- [ ] Sunday
- [ ] Monday
- [ ] Thursday
- [ ] Friday

The picture shows the length of two money boxes.

- [ ] 1.2 cm
- [ ] 1.6 cm
- [ ] 2.6 cm
- [ ] 0.6 cm

Tina bought 35 L of petrol at $1.52 per litre. How much did she pay for the petrol?

$ 53.20
This scale shows the weight of Bec’s suitcase.

Bec

10 kg

20 kg

This scale shows the weight of Dan’s suitcase.

Dan

10 kg

30 kg

By how much more does Dan’s suitcase weigh than Bec’s?

Write your answer in the box.

kg

10

Nick starts with a number.

He divides it by 8 and then multiplies it by 6. The answer is 360.

What number did he start with?

Shade one bubble.

80

60

480

360
A whale watching company is based at Anchor Beach (point A).

They have 3 boats out at sea.

Big Sur at point B.

Crackerjack at point C.

Delaney at point D.

15 What is the grid reference of Delaney? K5

16 Which compass direction is Crackerjack from Anchor beach? NE

17 Big Sur is travelling directly back to Anchor beach at an average speed of 30 km/hr.

Use the key to calculate how many minutes it will take to get back.

50
18 Mitch has some star shaped tiles.
Each edge of a tile is 4 cm long.

He puts two tiles together to make this shape.

Work out the perimeter of Mitch’s shape.

Write your answer in the box.

56 cm

19 Shade the bubble under the solid that is NOT the same as solid X.

solid X

Shade one bubble.
20 Here is a 1 cm square grid. Some of the grid is shaded.

What is the area that is shaded?

Write your answer in the box.

15 cm²

21 Which two cards add to give a total of 9?

Shade one bubble.
22 This question is based on the table below:

<table>
<thead>
<tr>
<th>EVENT</th>
<th>TEAM 1</th>
<th>TEAM 2</th>
<th>TEAM 3</th>
<th>TEAM 4</th>
<th>TEAM 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backstroke</td>
<td>20</td>
<td>12</td>
<td>15</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Freestyle</td>
<td>15</td>
<td>11</td>
<td>20</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>Butterfly</td>
<td>14</td>
<td>20</td>
<td>17</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Breaststroke</td>
<td>13</td>
<td>18</td>
<td>20</td>
<td>18</td>
<td>15</td>
</tr>
</tbody>
</table>

A school has a swimming carnival.

The winner of each event scores 20 points.

The above chart shows the points scored by each team.

**Which team came second in the freestyle event?**

[5]

23 Miss Bowman mixes some orange drink for a party. She pours orange squash into a jug.

How much water must she add to make 600 millilitres of drink?

[280 mL]
The next 4 questions are based on this train timetable:

<table>
<thead>
<tr>
<th></th>
<th>2153</th>
<th>2228</th>
<th>2326</th>
<th>0028</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pointville</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charlestown</td>
<td>2159</td>
<td>2234</td>
<td>2332</td>
<td>0034</td>
</tr>
<tr>
<td>Adventure Bay</td>
<td>2213</td>
<td>2248</td>
<td>X</td>
<td>0048</td>
</tr>
<tr>
<td>Cascade</td>
<td>2232</td>
<td>2307</td>
<td>0005</td>
<td>0107</td>
</tr>
<tr>
<td>Golden Valley</td>
<td>2258</td>
<td>2333</td>
<td>0031</td>
<td>Y</td>
</tr>
</tbody>
</table>

24 What is the missing time X written in 12-hour time?

11:46 pm

25 The train takes 6 minutes to travel between Pointville

and Charlestown

26 What is the time that is missing at Y, in 12-hour time?

1:33 am

27 Tim and Sarah are at a party in Pointville. They live in Cascade, and their dad is going to pick them up from Cascade station at 10:32 pm. If it takes them 15 minutes to walk to the station at Pointville, what is the latest time they should leave the party to go home?

9:38 pm
28 Here is a kite:

\[ y \]

\[ x \]

B (7,8)
A (5,6)
C (12,6)
D

Write the coordinates of point D.

\[
\begin{pmatrix} 7 \\ 4 \end{pmatrix}
\]

Write your answer in the box.

29 A sequence of numbers is shown below. The rule is written in words.

Multiply the last number by 3 and then subtract 2.

|  13 |  37 | 109 | 325 |

The sequence continues.
The number 8 749 is in the sequence.

Calculate the number which comes immediately before 8 749 in the sequence.

2 917

Write your answer in the box.
The next 2 questions are based on this graph:

From the graph, find the height of the kite at 25 seconds.

\[ \text{30 a} \quad \text{Write your answer in the box.} \]

\[ 30 \text{ metres} \]

Use the graph to find how long it took the kite to rise from 25 metres to 40 metres.

\[ \text{30 b} \quad \text{Write your answer in the box.} \]

\[ 15 \text{ seconds} \]

END OF TEST
Student Details

First Name

Last Name

Today’s Date is: ____________________

Test Instructions

You have 40 minutes to complete this test.

You are NOT allowed to use a calculator.

You should use a pencil to write your answers or shade in the bubble.

If you make a mistake, rub it out thoroughly.

The following test has been designed by 3P Learning to prepare students for the National Assessment Program Numeracy Test. This test is to be used for revision purposes only. 3P Learning does not guarantee that the format of this test is the same as an actual test.
1. How much greater than 6 592 is 7 292?

- 7 000
- 7 00
- 7
- 18

2. 0.3, 0.7, 1.1, 1.9

The missing number from this sequence is:

- 1.2
- 1.3
- 1.4
- 1.5

3. Solve for \(x\).

\[4x - 5 = 27\]

\[x = 8\]

4. The bus arrives at the bus stop at 8:10 am. Bec looks at the clock and says, “I must leave in 20 minutes.” What time is showing on the clock?
5 When some money was shared out equally between 8 people, each person received $9.00.

If the same amount was shared between 6 people, how much money would each person receive?

- $9.00
- $8.00
- $12.00
- $72.00

6 What is the size of angle \(x\)?

- 15°
- 25°
- 75°
- 105°

7 225% is equal to:

- \(2 \frac{3}{4}\)
- \(2 \frac{1}{5}\)
- \(2 \frac{1}{4}\)
- \(2 \frac{1}{2}\)
8. What is the rule relating the values shown in the table?

<table>
<thead>
<tr>
<th>x</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>y</td>
<td>8</td>
<td>11</td>
<td>14</td>
<td>17</td>
<td>20</td>
</tr>
</tbody>
</table>

- $y = 2x + 3$
- $y = 3x + 2$
- $y = 2x - 3$
- $y = 3x - 2$

9. The piece missing from the inside of this tessellating pattern is:

10. From the diagram, what size is angle A?

- 115°
- 105°
- 125°
- 70°
11 A regular six-sided die is rolled once. The chance of getting a number greater than 4 is:

- Certain
- Likely
- Unlikely
- Impossible

12 Tim wants to buy an iPod for $180 and has set himself a goal of six months to save up. To buy the iPod in six months, the mean (average) amount that Tim needs to save each month is:

- $20
- $30
- $60
- $18

13 \(-14 + 6 = ?\)

- 20
- 8
- \(-8\)
- \(-20\)

14 Which of these has the greatest value?

- \(\frac{3}{4}\)
- \(\frac{1}{5}\)
- 50%
- 0.3
15. What is the chance that this spinner will not land on blue?

- Shade one bubble.

16. Tess builds a model from cubes.
   What is the view seen from the direction of the arrow?

- Shade one bubble.

17. The perimeter of this shape is:

   - Write your answer in the box.

   38 m
Look at this diagram and answer questions 18 and 19.

**Angle A is equal to:**

- B
- C
- D
- F

**Angles E and G:**

- are alternate angles.
- are corresponding angles.
- are complementary angles.
- are vertically opposite angles.
20. Ben and Mia shared a pizza.
Ben ate \( \frac{3}{8} \) of the pizza and Mia ate \( \frac{1}{2} \) of the pizza.

Which picture shows how much pizza was left over?

A  
B  
C  
D  

21. In the Venn diagram, all the numbers in Set A are multiples of 4.
In Set B, the numbers are multiples of 8 and Set C contains multiples of 6.

Which number should go in the intersecting segment of all three sets?

○ 14   ○ 24   ○ 36   ○ 28
22 The table below shows the number of students from two classes that play sport.

<table>
<thead>
<tr>
<th></th>
<th>Wednesday Sport</th>
<th>Thursday Sport</th>
</tr>
</thead>
<tbody>
<tr>
<td>7A</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>7B</td>
<td>9</td>
<td>6</td>
</tr>
</tbody>
</table>

What is the probability that a student, chosen at random, will be from 7A and plays sport on a Wednesday?

\[
\frac{8}{11}, \quad \frac{8}{19}, \quad \frac{8}{17}, \quad \frac{8}{34}
\]

Shade one bubble.

23 \[3^3 \times 3^2 = ?\]

\[243, \quad 51, \quad 72, \quad 27\]

Shade one bubble.

24 The shape below is shown after it has been rotated a quarter turn clockwise.

What did the shape look like before it was rotated?
25 A school plays netball each year. There are two teams. Here are their results.

<table>
<thead>
<tr>
<th>Year</th>
<th>East</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>500</td>
<td>400</td>
</tr>
<tr>
<td>2000</td>
<td>450</td>
<td>350</td>
</tr>
<tr>
<td>2001</td>
<td>550</td>
<td>450</td>
</tr>
<tr>
<td>2003</td>
<td>520</td>
<td>420</td>
</tr>
</tbody>
</table>

What is the average (mean) difference in points?

○ 100  ● 150  ○ 200  ○ 250

26 Which number goes on the number line at the point shown by the arrow:

○ 4  ○ 4 1/4  ○ 4 1/2  ● 4 3/4
27 Which is the net of this hexagonal prism?

![Hexagonal Prism Nets]

28 An isosceles triangle is drawn.

What is the size of angle A?

![Isosceles Triangle]

29 Dan and his friends are planning a party.

Each person at the party will get 3 slices of pizza and 2 cans of drink.

They make 9 pizzas with 5 slices in each. How many cans of drink do they need?

![Pizza and Drinks Options]

Choice: 45, 30, 25, 15
Bec has 5 blocks that are all the same weight. She balances them on the scale with 2 weights.

Calculate the weight of 2 blocks.

Shade one bubble.
You have 40 minutes to complete this test.

You are allowed to use a calculator.

You should use a pencil to write your answers or shade in the bubble.

If you make a mistake, rub it out thoroughly.

The following test has been designed by 3P Learning to prepare students for the National Assessment Program Numeracy Test. This test is to be used for revision purposes only. 3P Learning does not guarantee that the format of this test is the same as an actual test.
1. This graph shows the different sports girls and boys play in one school.

Use the information in the graph to complete the table:

<table>
<thead>
<tr>
<th></th>
<th>Hockey</th>
<th>Netball</th>
<th>Soccer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>250</td>
<td>200</td>
<td>300</td>
</tr>
<tr>
<td>Girls</td>
<td>400</td>
<td>300</td>
<td>200</td>
</tr>
</tbody>
</table>

2. 375% is equal to:

\[
\begin{align*}
\frac{3}{4} & , \quad \frac{3}{3} & , \quad \frac{2}{3} & , \quad \frac{3}{4}
\end{align*}
\]

Shade one bubble.

3. Tan thought of a number. She multiplied it by 8 and added 6. She ended up with 78. What was the number that she started with?

\[
\begin{align*}
8 & , \quad 9 & , \quad 10 & , \quad 12
\end{align*}
\]

Shade one bubble.
4. What is the area of the parallelogram?

Scale

- 1 cm
- 1 cm
- 11 cm²
- 24 cm²
- 28 cm²
- 32 cm²

5. For the values in this table, what is the rule that describes \( y \) in terms of \( x \)?

<table>
<thead>
<tr>
<th>( x )</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>( y )</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>23</td>
</tr>
</tbody>
</table>

- \( y = 2x - 3 \)
- \( y = 2x + 3 \)
- \( y = 3 - 2x \)
- \( y = 2x \)

6. Which is the warmest temperature?

- \(-14°C\)
- \(-18°C\)
- \(-4°C\)
- \(-5°C\)

7. \( 22.45 \div 2 = \) 11.225
8. Jake bought some lollies and put them in a container. He offered one to his brother Max. What is the chance that Max would choose this lolly?

- $\frac{1}{3}$
- $\frac{1}{4}$
- $\frac{3}{4}$
- $\frac{4}{12}$

9. $12 - (\ ? - 3) = 4$

What is the missing number?

- 8
- 9
- 10
- 11

10. Which calculation below has the same answer as $36 \times 4$?

- $8 \times 16$
- $10 \times 14$
- $9 \times 16$
- $34 \times 6$
11. Determine the number of faces (F), vertices (V) and edges (E) in this shape.

- F = 9, V = 9, E = 16
- F = 9, V = 10, E = 12
- F = 8, V = 8, E = 16
- F = 8, V = 9, E = 12

12. \(5(x - 4) + 4 = \) ?

- \(5x\)
- \(5x + 16\)
- \(5x - 16\)  
- \(5x + 24\)

13. Which rule describes the graph?

- \(y = x + 2\)
- \(y = -x - 2\)
- \(y = -x + 2\)
- \(y = x - 2\)
14. What will the time be 53 minutes after 7.52am?

15. Carl chooses a number. He divides it by 2, subtracts 3, then divides by 8. He is left with the number 1. What number did Carl choose?

22  21  10  5

16. Tina paid $60 for a pair of shoes after they were discounted by 20%. What was the original price of the shoes?

$ 75

17. In this diagram, which angle is supplementary to angle X?
18. Ellen bought 2 peaches for $1.20 each, 3 punnets of strawberries for $2.50 each and 3 bananas for 85c each. How much does this cost? 

$12.45

19. Here is an equilateral triangle inside a square.

The perimeter of the triangle is 54 centimetres. What is the perimeter of the square?

- 18 cm
- 72 cm
- 162 cm
- 54 cm

20. A cube has a volume of $512 \text{ cm}^3$. What is the side length of the cube?

- 8 cm
- 9 cm
- 11 cm
- 13 cm

21. The area of this triangle is:

- $40 \text{ cm}^2$
- $44 \text{ cm}^2$
- $48 \text{ cm}^2$
- $96 \text{ cm}^2$
There are 630 students at a school. The ratio of girls to boys is 3:4. How many boys go to this school?

360

Jamal's workbook is 5.6 centimetres thick. The front and back cardboard covers are each 0.3 centimetres thick and each page is 0.04 centimetres thick. How many pages are in his workbook?

125 pages

Ellie has made a spinner with 5 different colours. When she uses her spinner:
- It is half as likely to land on blue as it is on red.
- It is three times as likely to land on red as it is on yellow.
- It is twice as likely to land on green as it is to land on purple.

Which spinner is Ellie's?

\[5x^2 = 80, \quad x = \boxed{4 \text{ or } -4}\]
26. At 10 pm Wednesday in Canberra, it is 3 am Wednesday in Los Angeles.
Sally catches an aeroplane from Canberra on Wednesday at 10 pm and arrives in Los Angeles 14 hours later. What day and time is it in Los Angeles when Sally arrives?

- Wednesday, 10 pm
- **Wednesday, 5 pm**
- Thursday, 12 noon
- Thursday, 2 pm

27. The volume of this prism is \(28 \text{ cm}^3\). What is \(x\)?

- 7 cm
- 9 cm
- 10 cm
- **14 cm**

28. The area of the shaded shape is \(80 \text{ cm}^2\). What is the perimeter of the shape?

- 24 cm
- 40 cm
- **48 cm**
- 80 cm
29. This tile has been turned three quarters clockwise and now looks like this:

Which tile shows what it looked like before it was turned?

Shade one bubble.

30. Liam spent $6.00 on some fancy chocolates for his mum.
How many grams did she get if they cost $30 a kilogram?

200 grams

Write your answer in the box.

31. Jessica’s water bill was $360 last month, $90 less than the month before.
By what percentage did her bill decrease?

80% 75% 20% 25%

Shade one bubble.

32. Two pencils have the same length as five erasers.

How many erasers will have the same length as 70 pencils?

175

END OF TEST
You have 40 minutes to complete this test.
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1. \(2^2 \times 3^3 = ?\)

- 31
- 36
- 35
- 108

2. Which set of clocks are displaying the same time?

- 14:30
- 18:05
- 22:00
- 13:00

3. The map shows a path from A to B to C. The directions from A to C via B are:

- NE then W
- SW then E
- NW then E
- SE then W
4 Which of these shapes has the fewest lines of symmetry?

- - - -

Shade one bubble.

5 Mai bought 3 drinks at 75c each, 2 pies at $1.25 each and 5 musk sticks at 25c each.
Which number sentence would calculate the total cost?

- \((3 \times 0.75) + (2 \times 1.25) + (5 \times 0.25)\)
- \((3 \times 75) + (2 \times 12.5) + (5 \times 0.25)\)
- \((3 \times 0.75) + (2 \times 12.5) + (5 \times 25)\)
- \((3 \times 7.5) + (2 \times 12.5) + (5 \times 0.25)\)

Shade one bubble.

6 175% is equal to:

- \(\frac{3}{4}\)
- \(\frac{1}{2}\)
- \(\frac{1}{2}\)
- \(\frac{1}{4}\)

Shade one bubble.
Which list is in ascending order?

- 25%, $\frac{1}{5}$, 0.15
- 75%, $\frac{7}{8}$, 1.10
- 30%, $\frac{7}{10}$, 0.33
- 60%, $\frac{4}{5}$, 0.4

In a class of 36 students, $\frac{5}{9}$ have a pet.

How many students do not have a pet?

- 16
- 18
- 20
- 22

$40.1 \times 0.98$ is closest to:

- 4
- 4000
- 0.004
- 40
10. What is the perimeter of this shape?

The perimeter of this shape is:

30 m

11. A student drew a path from the bus stop to their front door to show that the distance is 150 metres. What scale did the student use?

- 1 cm = 10 metres
- 1 cm = 5 metres
- 1 cm = 20 metres
- 1 cm = 30 metres

Shade one bubble.

12. What is the size of the marked angle?

- 270°
- 180°
- 90°
- 45°

Shade one bubble.
13. How much more juice is in Jug A?

Jug A: 140 mL
Jug B: 300 mL

☐ 100 mL
☐ 130 mL
☐ 160 mL
☐ 190 mL

14. A train is travelling at a constant speed of 250 km per hour. How long will it take the train to travel 150 km at this speed?

- 36 minutes
- 30 minutes
- 25 minutes
- 50 minutes

15. \[3.86 \div 0.2 = \boxed{19.3}\]
16 Movie sessions are shown below:

<table>
<thead>
<tr>
<th>MOVIE SESSION</th>
<th>START</th>
<th>FINISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghost Town</td>
<td>6:05 pm</td>
<td>7:56 pm</td>
</tr>
<tr>
<td>Brat Pack</td>
<td>6:15 pm</td>
<td>7:48 pm</td>
</tr>
</tbody>
</table>

How much longer is Ghost Town than Brat Pack?

18 minutes

17 Here is a square with 9 smaller squares shaded inside.
The squares are identical in size.
What fraction is shaded?

\[
\frac{9}{25}
\]

18 Which of these calculations gives the same value as \(112 + 25\)?

- \(110 + 12 + 25\)
- \(100 + 40 - 5\)
- \(110 + 30 + 5\)
- \(100 + 30 + 7\)
19. What is the size of angle A in this isosceles triangle?

![Diagram of an isosceles triangle with angle A labeled.]

Write your answer in the box.

\[ \text{Angle A} = 75^\circ \]

20. Maya starts with a number. She multiplies it by 9, subtracts 20 then adds 7. The answer is 95.
What number did she start with?

\[ 9 \times \_ \_ - 20 + 7 = 95 \]

Shade one bubble.

\[ \_ \_ \_ \_ \_ \]

21. Here is a model of cubes. What does this model look like from the direction of the arrow?

![Diagram of a model of cubes with an arrow pointing to it.]

Shade one bubble.

\[ \_ \_ \_ \_ \]
22. This table shows the number of students who wear glasses and those who do not wear glasses in a Year 7 class.

<table>
<thead>
<tr>
<th></th>
<th>Do wear glasses</th>
<th>Do not wear glasses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
<td>7</td>
</tr>
</tbody>
</table>

Out of the whole class, what percentage of males do not wear glasses?

- 60%
- 15%
- 35%
- 40%

Shade one bubble.

23. Which net can be used to make a square pyramid?

Shade one bubble.
24 A bag of lollies contains 5 musk sticks, 5 chocolate drops, 15 minties and 25 fantales.
What is the chance that when I choose a lolly without looking that it will be a chocolate drop?

- Certain
- Impossible
- Unlikely
- Fifty-fifty

25 \(14 \times 8 + 6 \times 8 = \)
- \((14 + 6) \times 8\)
- \(14 \times (8 - 6)\)
- \((14 - 8) \times 6\)
- \((14 - 8) \times (8 - 6)\)

26 These two rectangles have:

- Same perimeters, same areas
- Different perimeters, different areas
- Same perimeters, different areas
- Different perimeters, same areas
This graph shows the amount of money raised each month from a cake stall by Year 7 and Year 8.

How much more money did Year 7 raise than Year 8?

$250

28

7, 12, 27, 32, 47 ....

This rule can be described as:

- Add 5 then add 15
- Double the previous number then subtract 70
- Subtract 15 then subtract 10
- Subtract 15 then subtract 5
29 A mobile phone company charges a 55 cent connection fee and 30 cents for every minute of the call duration.

Which number sentence would calculate the cost of a 20 minute call?

- $(55 \times 20) + 30$
- $(30 \times 20) + 55$
- $55 \times (20 + 55)$
- $55 \times (20 + 30)$

30 The arrows on Spinner A and B are spun.

The two numbers that the arrows stop on are added together.

What is the chance of the arrow landing on a score of 10?
The next 2 questions refer to this graph:

Which motel charges $120 for 3 nights?

Motel Monaro Forrest Inn Terry’s Tavern

What is the difference in price between the most expensive and the least expensive hotel for 4 nights?

$ 140

Write your answer in the box.

END OF TEST