

Level 2 Test – Knowledge

Name

60 minutes Non-calculator Scribbling paper allowed

Put marks or ticks in the right column. Multiply total by 1.44 (round up) to get a score /52

Score: /36 × 1.44 = /52

Number		
Q1	Circle the rational numbers: 3 0.16 $\sqrt{6}$ $\sqrt{49}$ 2π ∞	/1
Q2	What is $\frac{3}{20}$ of \$60?	/1
Q3	4 ounces of gold is worth \$4260. How much is 7 ounces worth?	/1
Q4	Water and cordial should be mixed in the ratio 9:2. How much cordial should be put with 15 L of water?	/1
Q5	Find 0.8×0.02	/1
Q6	What is $6 \div -2$?	/1
Q7	$2\frac{4}{5} - \frac{5}{6}$ in simplest form.	/1
Q8	Write 45% as a common fraction in simplest form.	/1

Algebra														
Q9	A relation has the formula $h = 2t + 5$. Complete this table for the relation:	/2												
	<table border="1"> <tr> <td>t</td> <td>2</td> <td>6.5</td> <td>-5</td> <td></td> <td></td> </tr> <tr> <td>h</td> <td></td> <td></td> <td></td> <td>27</td> <td>4</td> </tr> </table>		t	2	6.5	-5			h				27	4
t	2		6.5	-5										
h				27	4									

Q10	Write and solve an equation to answer this question. Show working. Harry collects pot plants. His brother has 4 less than him. His sister has twice as many as his brother. Between the three of them, they have 16. How many does Harry have?	/2
Q11	Solve $6x + 5 - x - 11 = 21$, showing working.	/2
Q12	Solve $x - 2 - 4(x - 5) = 9$, showing working.	/2

Measurement

Q13 Yoder entered his cave at midnight on May 21 and came out at midnight on September 2.
How many days was he in there? /1

Q14

Stop	Destination				
	Roma Street	Roma Street	Roma Street	Cleveland	Kuraby
Doomben Station	2:58 pm	3:28 pm	3:58 pm	4:28 pm	4:58 pm
Ascot Station	3:01 pm	3:31 pm	4:01 pm	4:31 pm	5:01 pm
Hendra Station	3:03 pm	3:33 pm	4:03 pm	4:33 pm	5:03 pm
Clayfield Station	3:05 pm	3:35 pm	4:05 pm	4:35 pm	5:05 pm
Eagle Junction Station	3:08 pm	3:38 pm	4:08 pm	4:38 pm	5:08 pm
Wooloowin Station	3:10 pm	3:40 pm	4:10 pm	4:40 pm	5:10 pm
Albion Station	3:12 pm	3:42 pm	4:12 pm	4:42 pm	5:12 pm
Bowen Hills Station	3:16 pm	3:46 pm	4:16 pm	4:46 pm	5:16 pm
Fortitude Valley Station	3:18 pm	3:48 pm	4:18 pm	4:48 pm	5:18 pm
Central Station *	3:22 pm	3:52 pm	4:22 pm	4:54 pm	5:27 pm
Roma Street Station	3:25 pm	3:55 pm	4:25 pm	4:57 pm	5:30 pm
South Brisbane Station	—	—	—	5:02 pm	5:35 pm
South Bank Station	—	—	—	5:04 pm	5:37 pm

You wish to travel from Ascot to Bowen Hills.
If you arrive at Ascot station at 3:50 pm,
when would you get to Bowen Hills? /1

Q15 If it is 4 p.m.in Brisbane at 150°E,
what time would it be in New York (75°W)?
Assume no daylight saving. /1

Q16 What is the area of a right-angle triangle
with side lengths 12 cm, 13 cm and 5 cm? /1

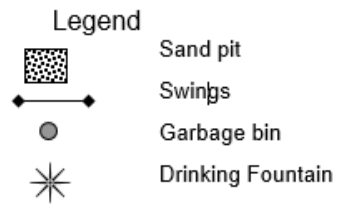
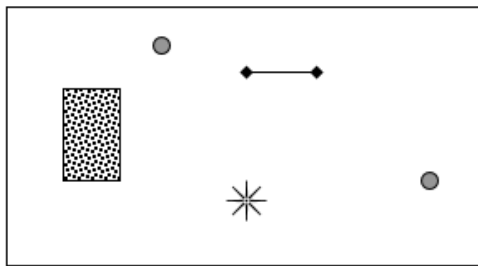
Q17 Find the volume and surface area of a rectangular prism 5 m by 2 m by 1.5 m.
Volume = m^3 Surface area = m^2 /2

Q18

Read this scale. /1

Geometry

Q19



/1

If the garbage bins are 31 m apart, the area of the sand pit is closest to:

- A 12 m^2 B 30 m^2 C 64 m^2 D 117 m^2

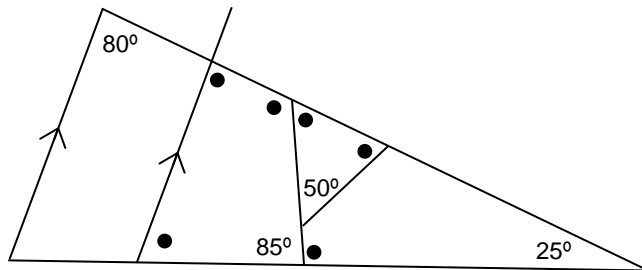
Q20

Name this shape.



/1

Q21



/2

Write in the sizes of all the angles marked with a dot.

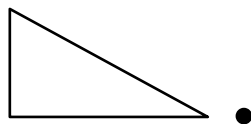
Q22

What is the name for a triangle with two sides equal?

/1

Q23

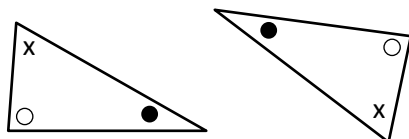
Rotate this triangle 120° clockwise about the point shown.



/1

Q24

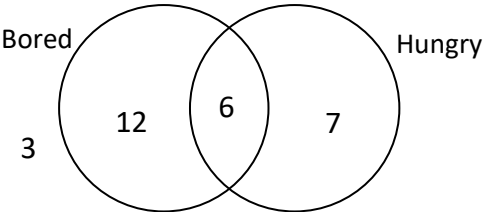
Do these triangles have to be congruent?



/2

If so, which theorem is used to show it?

Statistics		
Q25	A sample which is quite like the population in terms of the proportions giving different answers or observations is described as	/1
Q26	Find the median of 2, 3, 3, 5, 6, 8, 12	/1

Probability		
Q27	What is probability?	/1
Q28	Two dice each have six faces numbered 1, 2, 2, 3, 3 and 5. If you roll both, what is the probability you will get a total of 8?	/1
Q29	<p>This Venn diagram shows the number of people in a class who are bored and the number who are hungry.</p>  <p>If you picked a random person from this class, what is the probability that they would be hungry?</p>	/1