Problem Solving Test

Name _____ **Class** _____

Total = ~~50~~ 40

1. The sum of two numbers is 45 and one number is double the other.
   Find the two numbers.

   _____ 15 ✓

   _____ 30 ✓ [2]

2. The difference between two numbers is 16 and one is three times the size of the other.
   Find the two numbers.

   I mark for working if it looks vaguely correct

   _____ 8 ✓

   _____ 24 ✓ [3]

3. Mr and Mrs Jones took their 5 children to the Zoo and the total cost was $103.50.
   If a child's ticket is half the cost of an adult ticket how much does an adult ticket cost?
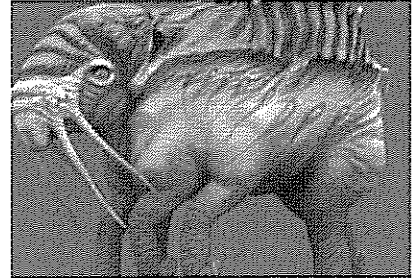
   $$103.50 \div 9 \times 2 = 23.$$

   ✓

   ✓✓

   _____ 3

_____ ~~[3]~~

4. On the planet Pandora they have the Tapirus which is a 6 legged animal. Farmer Jones has some of the Tapirus in a paddock along with some cows. When he counts them he can see that there are 178 legs and 35 heads.

How many of each animal are there?

Working ✓✓

Cows_____ 16 ✓

Tapirus_____ 19. ✓ [4]

5. A frog is at the bottom of a well that is 15 metres deep. He can climb 3 metres each day but slides back down 1 metre at the end of each day.
How many days will it take him to climb out of the well?

7 ✓✓

_____[2]

6. Carmen has a better paying job than Ramon but lower paying than Ricardo. Carmen has a better paying job than Ryan who has a better paying job than Ramon. Rank the four of them from the highest paying job to the lowest.

½ mark for each correct position

Ricardo Carmen Ryan Ramon. [2]

7. Alexa used 26 wooden posts to build a fence around her rectangular gardens. The long side of the rectangle had 3 more posts than the short sides. Draw a diagram to show how many posts in each side.
How many posts are used on the long side?

X X X X   4   X

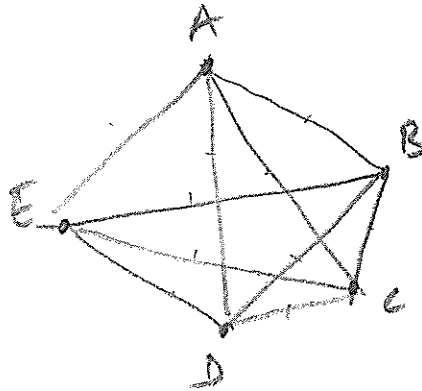4   4 ✓

X X X X   4   X

3

9 ✓✓ 3

_____

8. Fred went to the mall and spent half of his money at the movies and then half of what was left on food. After that he spent half of what he had left on lollies. By this stage he only had enough left to pay for his $2.50 bus fare home. How much did he start out with?

2.50 -
5.00 .
10.00 ✓
20

20 ✓✓
_____[3]

9. Mr A, Ms B, Mr C, Ms D and Ms E meet for the first time. How many handshakes will be needed before each person has shaken every other persons hand? (Please note that Mr A shaking hands with Mr B and Mr B shaking hands with Mr A only counts as one handshake.)

10
_____[3]

10. If Mr A, Ms B, Mr C, Ms D and Ms E are to work in groups of three.
How many different combinations of three can they make?

$5 \times 4 \times 3$ $4 \times 3 = 12$

$4 \times 3 \times 2 = 24$

_____[2]

11. Jonathan has a dental appointment for 3.35 pm. He knows that it will take him 25 minutes to drive there, 10 minutes to park and put money in the parking meter, 5 minutes to brush his teeth and 15 minutes to get dressed.
What time should he start getting ready to go to the dentist?

$$25+10+5+15 = 55$$
$$3.35 - 55 = 2.40 ✓$$

2.40pm ✓✓ [3]

12. A pen and pencil cost a total of $24. The pen costs $3 more than the pencil.
How much did the pen and pencil each cost?

1 ✓ 10.50
1 ✓ 13.50

1 for working ✓

Pen ___ $13.50 ✓

Pencil ___ $10.50 [3]

13. I think of a number, multiply it by 6, then subtract 8 from the answer, then divide the answer by 5. I am left with the number 8. What was the number I first thought of?

$\times 6 \quad - 8 \quad \div 5 \quad = 8.$

$8 \qquad \div 6 \quad + 8 \quad \times 5$

_____8_____[2]

14. Four brothers Allan, Bert, Charles and Dan are very fussy about the food they eat, particularly fruit. Their mother has fruit prepared as part of their lunch. She has strawberries, oranges, round apples and bananas. Allan, Bert and Charles won't eat anything orange in colour. Charles won't eat anything red or round in shape. Bert won't eat anything that <u>can</u> be peeled before eating.
Match each brother to the fruit he eats.

		Fruit
Allan		Apple
Bert		Strawberrie
Charles		Banana
Dan		Oranges

[5]

7