Quick Revision Sheet 16

Some space is provided for quick calculations. Show your full working on a separate sheet where appropriate and hand this in to your teacher for marking.

1. Solve $49x^2+14x+1=0$ — A _____

2. Solve $x^2+x=0$ — B _____

3. Express $0.\dot{3}\dot{1}$ as a fraction. — A _____

4. Find the image of the point (0, 1) when it is reflected in the line $y=x$ — B _____

5. Factorise $4x^2-81$ — B _____

6. Three green and two blue balls are placed in a bag. A ball is chosen at random and replaced. A second ball is chosen at random. What is the probability that both balls chosen will be green? — B _____

7. Simplify $\frac{x+6}{x^2+6x+8}\times\frac{x+4}{x+6}$ — A* _____

8. Find the minimum value of $x^2-8x+21$ — A* _____

9. Simplify $(a^m\times a^n\div a^{-p})\times\sqrt[3]{27}$ — A* _____

10. Show that an increase of 10% followed by an increase of 12% is equivalent to an increase of 23.2% — B _____

11. Write down the **exact** solutions to $x^2-5x-12=0$ (use the quadratic formula) — A _____

12. Find $64^{-\frac{1}{3}}$ as a fraction — B _____

13. Simplify $\sqrt{20}+3\sqrt{5}$ — A _____

14. John scored 14 out of 20 in his maths test. What percentage was that? — C _____

15. x is acute and $\sin x=0.5$. Find x. — B _____

16. Write down the acute angle whose sine is equal to $\cos 70°$ — A _____

17. Express $\frac{1}{x}+\frac{1}{x+1}$ as a single algebraic fraction — A* _____

18. Solve the equation $\frac{1}{x-1}+\frac{1}{x}=\frac{7}{12}$ — A* _____

19. Express $2.7\times10^5+3\times10^4$ in standard index form — B _____

20. $y=\sqrt{ax^2+b}$. Make x the subject of this formula. — A* _____

21. Calculate an estimate for the mean from this grouped table

Number of fish caught in a competition	Frequency
0–6	2
7–11	7
12–16	1

B _____

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