Multiple choice questions - Formulae and identities

Year: Year 10 · 10

Question 1 Make x the subject of $y = 2x + 3$.

- ◯ **A.** $x = \dfrac{y - 3}{2}$
- ◯ **B.** $x = 2y - 3$
- ◯ **C.** $x = \dfrac{y}{2} - 3$
- ◯ **D.** $x = \dfrac{y + 3}{2}$

Question 2 Which symbol means 'is identical to'?

- ◯ **A.** $=$
- ◯ **B.** $\equiv$
- ◯ **C.** $\approx$
- ◯ **D.** $\neq$

Question 3 Make u the subject of $v = u + at$.

- ◯ **A.** $u = v + at$
- ◯ **B.** $u = v - at$
- ◯ **C.** $u = \dfrac{v}{at}$
- ◯ **D.** $u = at - v$

Question 4 If $3x + 2y = 12$, then $y =$

- ◯ **A.** $\dfrac{12 - 3x}{2}$
- ◯ **B.** $12 - 3x$
- ◯ **C.** $\dfrac{12 + 3x}{2}$
- ◯ **D.** $6 - 3x$

Question 5 The sum of two consecutive integers n and $n + 1$ is

- ◯ **A.** $2n$
- ◯ **B.** $2n + 1$
- ◯ **C.** $n^2 + 1$
- ◯ **D.** $2n + 2$

Question 6 Which expression is always even when n is an integer?

- ◯ **A.** $2n$
- ◯ **B.** $2n + 1$
- ◯ **C.** $n + 1$
- ◯ **D.** $3n$

Question 7 Make r the subject of $A = \pi r^2$ $(r > 0)$.

- ◯ **A.** $r = \dfrac{A}{\pi}$
- ◯ **B.** $r = \sqrt{\dfrac{A}{\pi}}$
- ◯ **C.** $r = \dfrac{A}{2\pi}$
- ◯ **D.** $r = A\pi^2$

Question 8 (Higher) An odd number can always be written as

- ◯ **A.** $2n$
- ◯ **B.** $2n + 1$
- ◯ **C.** n^2
- ◯ **D.** $n + 2$

Question 9 $v = u + at$ with $u = 3$, $a = 2$, $t = 5$ gives $v =$

- ◯ **A.** 13
- ◯ **B.** 25
- ◯ **C.** 10
- ◯ **D.** 30

Question 10 (Higher) Make x the subject of $y = \dfrac{x + 1}{x}$.

- ◯ **A.** $x = \dfrac{1}{y - 1}$
- ◯ **B.** $x = y - 1$
- ◯ **C.** $x = \dfrac{1}{y + 1}$
- ◯ **D.** $x = y + 1$

Answer grid - Formulae and identities

Year: Year 10

Question	Answer	Explanation
1	**A**	Subtract 3 then divide by 2.
2	**B**	$\equiv$ is used for identities.
3	**B**	Subtract at.
4	**A**	Subtract $3x$, then divide by 2.
5	**B**	$n + n + 1$.
6	**A**	It is a multiple of 2.
7	**B**	Divide by π, then square root.
8	**B**	One more than an even number.
9	**A**	$3 + 10$.
10	**A**	$xy = x + 1$, $x(y - 1) = 1$.