AQA Level 2 Further mathematics Number & algebra

Section 1: Basic number and algebra

Section test

1) Work out $\left(4\frac{1}{4}-2\frac{2}{3}\right)\div 1\frac{1}{6}$

(a) $1\frac{13}{14}$
(b) $1\frac{27}{28}$
(c) $1\frac{5}{14}$
(d) $-\frac{3}{2}$
(e) I don't know

2) In a sale, a coat priced at £150 is reduced by 55%. What is the new price of the coat?

(a) £82.50
(b) £67.50
(c) £95.00
(d) £145.00
(e) I don't know

3) The expression $3(2x+3y-1)-2(3x-2y-4)$ can be simplified to give the expression

(a) $13y+5$
(b) $10y+5$
(c) $12x+5y-11$
(d) $y-5$
(e) I don't know

4) The expression $(2x-5)(x+3)$ is equivalent to

(a) $2x^2+x-15$
(b) $2x^2-x-15$
(c) $2x^2+11x-25$
(d) $2x^2-2x-15$
(e) I don't know

5) Simplify $\sqrt{75}-\sqrt{27}$

(a) $\sqrt{12}$
(b) $\sqrt{48}$
(c) $4\sqrt{3}$
(d) $2\sqrt{3}$
(e) I don't know

AQA FM Number & algebra 1 section test

6) Simplify $\sqrt{12} \times \sqrt{8} \times \sqrt{98}$

(a) $56\sqrt{6}$
(b) $56\sqrt{3}$
(c) $28\sqrt{3}$
(d) $28\sqrt{6}$
(e) I don't know

7) The ratio $\sqrt{8} : \sqrt{18} : \sqrt{50}$ can be written in its simplest form as

(a) 4 : 9 : 25
(b) 2 : 3 : 5
(c) 1 : 10 : 42
(d) $1 : \sqrt{10} : \sqrt{42}$
(e) I don't know

8) Multiply out $\left(2-\sqrt{3}\right)\left(1+2\sqrt{3}\right)$ and simplify as far as possible

(a) $-4+\sqrt{3}$
(b) $2+3\sqrt{3}$
(c) $-4+3\sqrt{3}$
(d) $2+\sqrt{3}$
(e) I don't know

In Questions 9 and 10, rationalise the denominator and simplify as far as possible.

9) $\dfrac{2}{3\sqrt{2}}$

(a) $\dfrac{\sqrt{2}}{3}$
(b) $\dfrac{2\sqrt{2}}{3}$
(c) $3\sqrt{2}$
(d) $\dfrac{3\sqrt{2}}{2}$
(e) I don't know

10) $\dfrac{2+\sqrt{3}}{1+\sqrt{2}}$

(a) 5
(b) $2+\sqrt{3}-2\sqrt{2}-\sqrt{6}$
(c) $2\sqrt{2}+\sqrt{6}-\sqrt{3}-2$
(d) $\dfrac{2+\sqrt{3}}{5}$
(e) I don't know