Rationalising Surds (D)

Section A

Rationalise the denominator of the following.

1) $\frac{3}{\sqrt{2}}$ _____

2) $\frac{11}{\sqrt{5}}$ _____

3) $\frac{9}{\sqrt{7}}$ _____

4) $\frac{4}{\sqrt{11}}$ _____

5) $\frac{20}{\sqrt{13}}$ _____

6) $\frac{15}{\sqrt{3}}$ _____

7) $\frac{14}{\sqrt{2}}$ _____

8) $\frac{20}{\sqrt{5}}$ _____

9) $\frac{22}{\sqrt{11}}$ _____

10) $\frac{8}{\sqrt{6}}$ _____

11) $\frac{28}{3\sqrt{7}}$ _____

12) $\frac{18}{5\sqrt{3}}$ _____

13) $\frac{2}{7\sqrt{4}}$ _____

14) $\frac{25}{3\sqrt{5}}$ _____

15) $\frac{54}{9\sqrt{2}}$ _____

16) $\frac{\sqrt{27}}{\sqrt{3}}$ _____

17) $\frac{\sqrt{75}}{\sqrt{3}}$ _____

18) $\frac{\sqrt{64}}{\sqrt{4}}$ _____

19) $\frac{\sqrt{98}}{\sqrt{2}}$ _____

20) $\frac{\sqrt{24}}{\sqrt{6}}$ _____

Section B

Rationalise the denominators of the following.

1) $\frac{11}{2-\sqrt{3}}$ _____

2) $\frac{1}{2-\sqrt{5}}$ _____

3) $\frac{12}{3-\sqrt{3}}$ _____

4) $\frac{7}{1+\sqrt{2}}$ _____

5) $\frac{4}{3+\sqrt{11}}$ _____

6) $\frac{1}{\sqrt{3}-1}$ _____

Rationalising Surds (D)

Section C

1) Express $\frac{\sqrt{9}+13}{\sqrt{9}-1}$ as an integer.

2) Express $\frac{\sqrt{3}+3}{\sqrt{3}-1}$ in the form $m + n\sqrt{3}$, where *m* and *n* are integers.

3) Express $\frac{\sqrt{2}+5}{\sqrt{2}-1}$ in the form $a\sqrt{2} + b$, where *a* and *b* are integers.

4) Express $\frac{\sqrt{12}-6}{\sqrt{12}+2}$ in the form $a - b\sqrt{3}$, where *a* and *b* are integers.

5) Express $\frac{\sqrt{7}+4}{2\sqrt{7}-2}$ in the form $p\sqrt{7} + q$, where *p* and *q* are rational.

6) Express $\frac{2\sqrt{3}+8}{5\sqrt{3}-6}$ in the form $q + p\sqrt{3}$, where *p* and *q* are rational.