Exercise 1D

Question 2:

(i) $3\sqrt{5}$ by $2\sqrt{5}$

$3\sqrt{5} \times 2\sqrt{5} = 3 \times 2 \times \sqrt{5} \times \sqrt{5}$
$= (3 \times 2 \times 5) = 30.$

(ii) $6\sqrt{15}$ by $4\sqrt{3}$

$6\sqrt{15} \times 4\sqrt{3} = 6 \times 4 \times \sqrt{15} \times \sqrt{3}$
$= 24 \times \sqrt{15 \times 3}$
$= 24 \times \sqrt{3 \times 5 \times 3}$
$= 24 \times 3\sqrt{5} = 72\sqrt{5}.$

(iii) $2\sqrt{6}$ by $3\sqrt{3}$

$2\sqrt{6} \times 3\sqrt{3} = 2 \times 3 \times \sqrt{6} \times \sqrt{3}$
$= 6 \times \sqrt{6 \times 3}$
$= 6 \times \sqrt{2 \times 3 \times 3}$
$= 6 \times 3\sqrt{2} = 18\sqrt{2}$

(iv) $3\sqrt{8}$ by $3\sqrt{2}$

$3\sqrt{8} \times 3\sqrt{2} = 3 \times 3 \times \sqrt{8} \times \sqrt{2}$
$= 9 \times \sqrt{8 \times 2}$
$= 9 \times \sqrt{2 \times 2 \times 2 \times 2}$
$= (9 \times 2 \times 2) = 36.$

(v) $\sqrt{10}$ by $\sqrt{40}$

$\sqrt{10} \times \sqrt{40} = \sqrt{10 \times 40}$
$= \sqrt{2 \times 5 \times 2 \times 2 \times 2 \times 5}$
$= (2 \times 2 \times 5) = 20$

(vi) $3\sqrt{28}$ by $2\sqrt{7}$

$3\sqrt{28} \times 2\sqrt{7} = 3 \times 2 \times \sqrt{28} \times \sqrt{7}$
$= 6 \times \sqrt{28 \times 7}$
$= 6 \times \sqrt{2 \times 2 \times 7 \times 7}$
$= (6 \times 2 \times 7) = 84.$

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