

A.N.2: Simplifying Radicals 3: Simplify radical terms (no variable in the radicand)

1 The expression $\sqrt{50}$ can be simplified to

- 1) $5\sqrt{2}$
- 2) $5\sqrt{10}$
- 3) $2\sqrt{25}$
- 4) $25\sqrt{2}$

6 Simplify: $\sqrt{12}$

7 Simplify: $\sqrt{75}$

2 When $\sqrt{72}$ is expressed in simplest $a\sqrt{b}$ form, what is the value of a ?

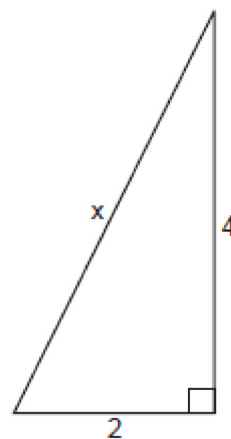
- 1) 6
- 2) 2
- 3) 3
- 4) 8

8 Simplify: $\sqrt{128}$

3 Which expression is equivalent to $7\sqrt{90}$?

- 1) $16\sqrt{10}$
- 2) $21\sqrt{10}$
- 3) $70\sqrt{9}$
- 4) $\sqrt{630}$

9 Theo determined that the correct length of the hypotenuse of the right triangle in the accompanying diagram is $\sqrt{20}$. Fiona found the length of the hypotenuse to be $2\sqrt{5}$. Is Fiona's answer also correct? Justify your answer.



4 The expression $\sqrt{150}$ is equivalent to

- 1) $25\sqrt{6}$
- 2) $15\sqrt{10}$
- 3) $5\sqrt{6}$
- 4) $6\sqrt{5}$

5 Simplify: $3\sqrt{27}$

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Answer Section

1 ANS: 1

$$\sqrt{50} = \sqrt{25} \sqrt{2} = 5\sqrt{2}$$

REF: 089902a

2 ANS: 1

$$\sqrt{72} = \sqrt{36} \sqrt{2} = 6\sqrt{2}$$

REF: 010530a

3 ANS: 2

$$7\sqrt{90} = 7\sqrt{9} \sqrt{10} = 21\sqrt{10}$$

REF: 060811a

4 ANS: 3

$$\sqrt{150} = \sqrt{25} \sqrt{6} = 5\sqrt{6}$$

REF: spring9819a

5 ANS:

$$9\sqrt{3}$$

REF: 099414a1

6 ANS:

$$2\sqrt{3}$$

REF: 039505a1

7 ANS:

$$5\sqrt{3}$$

REF: 099602a1

8 ANS:

$$8\sqrt{2}$$

REF: 099911a1

9 ANS:

Fiona's answer is correct. $\sqrt{20} = \sqrt{4} \sqrt{5} = 2\sqrt{5}$

REF: 080833a