

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

1. 060910ia, P.I. A.N.2

What is $\sqrt{32}$ expressed in simplest radical form?

- [A] $4\sqrt{8}$ [B] $16\sqrt{2}$
[C] $4\sqrt{2}$ [D] $2\sqrt{8}$

2. 089902a, P.I. A.N.2

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

- [A] $25\sqrt{2}$ [B] $2\sqrt{25}$
[C] $5\sqrt{2}$ [D] $5\sqrt{10}$

3. 010920ia, P.I. A.N.2

What is $\sqrt{72}$ expressed in simplest radical form?

- [A] $6\sqrt{2}$ [B] $8\sqrt{3}$
[C] $3\sqrt{8}$ [D] $2\sqrt{18}$

4. 010530a, P.I. A.N.2

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

- [A] 2 [B] 6 [C] 3 [D] 8

5. 080833a, P.I. A.N.2

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.



6. 060828ia, P.I. A.N.2

What is $\frac{\sqrt{32}}{4}$ expressed in simplest radical form?

- [A] $\frac{\sqrt{8}}{2}$ [B] $\sqrt{2}$ [C] $4\sqrt{2}$ [D] $\sqrt{8}$

7. 060811a, P.I. A.N.2

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

- [A] $70\sqrt{9}$ [B] $\sqrt{630}$
[C] $16\sqrt{10}$ [D] $21\sqrt{10}$

8. 080922ia, P.I. A.N.2

When $5\sqrt{20}$ is written in simplest radical form, the result is $k\sqrt{5}$. What is the value of k ?

- [A] 10 [B] 4 [C] 20 [D] 7

9. fall0731ia, P.I. A.N.2

Express $5\sqrt{72}$ in simplest radical form.

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[1] C _____

[2] C _____

[3] A _____

[4] B _____

[2] Yes, and both answers are shown to be equivalent using either decimal approximation or simplification of radicals.

[1] Appropriate work is shown, but one computational or rounding error is made.

or [1] Appropriate work is shown, but one conceptual error is made.

or [1] Yes, but an incomplete explanation is given, such as stating that $2\sqrt{5}$ and $\sqrt{20}$ are equivalent or that $\sqrt{20}$ simplifies to $2\sqrt{5}$, but no work is shown to support this.

[0] Yes, but no work is shown.

or [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an

[5] obviously incorrect procedure. _____

[6] B _____

[7] D _____

[8] A _____

[2] $30\sqrt{2}$, and appropriate work is shown.

[1] Appropriate work is shown, but one computational error is made.

or [1] Appropriate work is shown, but one conceptual error is made.

or [1] Appropriate work is shown, but the answer is not in simplest radical form.

or [1] $30\sqrt{2}$, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[9] incorrect procedure. _____