

**A.N.2: Simplifying Radicals 1: Simplify radical terms (no variable in the radicand)**

- 1 What is  $\sqrt{32}$  expressed in simplest radical form?
  - 1)  $16\sqrt{2}$
  - 2)  $4\sqrt{2}$
  - 3)  $4\sqrt{8}$
  - 4)  $2\sqrt{8}$
- 2 What is  $\sqrt{72}$  expressed in simplest radical form?
  - 1)  $2\sqrt{18}$
  - 2)  $3\sqrt{8}$
  - 3)  $6\sqrt{2}$
  - 4)  $8\sqrt{3}$
- 3 What is  $2\sqrt{45}$  expressed in simplest radical form?
  - 1)  $3\sqrt{5}$
  - 2)  $5\sqrt{5}$
  - 3)  $6\sqrt{5}$
  - 4)  $18\sqrt{5}$
- 4 What is  $3\sqrt{250}$  expressed in simplest radical form?
  - 1)  $5\sqrt{10}$
  - 2)  $8\sqrt{10}$
  - 3)  $15\sqrt{10}$
  - 4)  $75\sqrt{10}$
- 5 When  $5\sqrt{20}$  is written in simplest radical form, the result is  $k\sqrt{5}$ . What is the value of  $k$ ?
  - 1) 20
  - 2) 10
  - 3) 7
  - 4) 4
- 6 What is  $\frac{\sqrt{32}}{4}$  expressed in simplest radical form?
  - 1)  $\sqrt{2}$
  - 2)  $4\sqrt{2}$
  - 3)  $\sqrt{8}$
  - 4)  $\frac{\sqrt{8}}{2}$
- 7 Express  $4\sqrt{75}$  in simplest radical form.
- 8 Express  $5\sqrt{72}$  in simplest radical form.
- 9 Express  $-3\sqrt{48}$  in simplest radical form.
- 10 Express  $2\sqrt{108}$  in simplest radical form.

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### Answer Section

1 ANS: 2

$$\sqrt{32} = \sqrt{16} \sqrt{2} = 4\sqrt{2}$$

REF: 060910ia

2 ANS: 3

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

REF: 010920ia

3 ANS: 3

$$2\sqrt{45} = 2\sqrt{9} \sqrt{5} = 6\sqrt{5}$$

REF: 011203ia

4 ANS: 3

$$3\sqrt{250} = 3\sqrt{25} \sqrt{10} = 15\sqrt{10}$$

REF: 061106ia

5 ANS: 2

$$5\sqrt{20} = 5\sqrt{4} \sqrt{5} = 10\sqrt{5}$$

REF: 080922ia

6 ANS: 1

$$\frac{\sqrt{32}}{4} = \frac{\sqrt{16} \sqrt{2}}{4} = \sqrt{2}$$

REF: 060828ia

7 ANS:

$$4\sqrt{75} = 4\sqrt{25} \sqrt{3} = 20\sqrt{3}$$

REF: 011331ia

8 ANS:

$$30\sqrt{2} \cdot 5\sqrt{72} = 5\sqrt{36} \sqrt{2} = 30\sqrt{2}$$

REF: fall0731ia

9 ANS:

$$-3\sqrt{48} = -3\sqrt{16} \sqrt{3} = -12\sqrt{3}$$

REF: 081033ia

10 ANS:

$$2\sqrt{108} = 2\sqrt{36} \sqrt{3} = 12\sqrt{3}$$

REF: 081332ia