

ESTIMATING SQUARE ROOT

ANSWERS:

1. 9 and 10

2. 12 and 13

3. 10 and 11

4. 5 and 6

5. 8 and 9

6. 8 and 9

7. 10 and 11

8. 7 and 8

9. 13 and 14

10. 2 and 3

11. 2 and 3

12. 22 and 23

13. a. 4

b. 5

c. 5

d. 2

e. 6

f. 7

14. a. 10

b. 6

c. 2

d. 7

e. 8

f. 10

15. a. 2.6

b. 11.7

c. 8.1

d. 8.6

e. 10.9

f. 13.5

g. 6.2

h. 9.6

i. 4.2

$$16. \quad \sqrt{160} = \sqrt{2 \times 2 \times 2 \times 2 \times 2 \times 5}$$
$$\sqrt{160} = 2 \times 2 \sqrt{2} \times 5 = 4\sqrt{10}$$

$$17. \quad \sqrt{54} = \sqrt{2 \times 3 \times 3 \times 3}$$
$$\sqrt{54} = 3\sqrt{2} \times 3 = 3\sqrt{6}$$

$$18. \quad \sqrt{32} = \sqrt{2 \times 2 \times 2 \times 2 \times 2}$$
$$\sqrt{32} = 2 \times 2\sqrt{2} = 4\sqrt{2}$$