

Name

Date



## PRIME FACTORIZATION SHEET 2

Write out the prime factorization for each number. The first one is done for you.

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1)  $52 = 2 \times 2 \times 13 = 2^2 \times 13$

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2)  $90 =$

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3)  $72 =$

---

4)  $100 =$

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5)  $64 =$

---

6)  $105 =$

---

7)  $120 =$

---

8)  $85 =$

---

9)  $96 =$

---

10)  $112 =$

---

11)  $84 =$

---

12)  $108 =$

---

13)  $99 =$

---

14)  $150 =$

---

15)  $121 =$

---

16)  $144 =$

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17)  $180 =$

---

18)  $125 =$

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19)  $132 =$

---

20)  $200 =$

Can you re-write the products in exponential form?



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## PRIME FACTORIZATION SHEET 2 ANSWERS

Write out the prime factorization for each number.

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$$1) \quad 52 = 2 \times 2 \times 13 = 2^2 \times 13$$

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$$2) \quad 90 = 2 \times 3 \times 3 \times 5 = 2 \times 3^2 \times 5$$

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$$3) \quad 72 = 2 \times 2 \times 2 \times 3 \times 3 = 2^3 \times 3^2$$

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$$4) \quad 100 = 2 \times 2 \times 5 \times 5 = 2^2 \times 5^2$$

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$$5) \quad 64 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 2^6$$

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$$6) \quad 105 = 3 \times 5 \times 7$$

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$$7) \quad 120 = 2 \times 2 \times 2 \times 3 \times 5 = 2^3 \times 3 \times 5$$

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$$8) \quad 85 = 5 \times 17$$

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$$9) \quad 96 = 2 \times 2 \times 2 \times 2 \times 2 \times 3 = 2^5 \times 3$$

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$$10) \quad 112 = 2 \times 2 \times 2 \times 2 \times 7 = 2^4 \times 7$$

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$$11) \quad 84 = 2 \times 2 \times 3 \times 7 = 2^2 \times 3 \times 7$$

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$$12) \quad 108 = 2 \times 2 \times 3 \times 3 \times 3 = 2^2 \times 3^3$$

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$$13) \quad 99 = 3 \times 3 \times 11 = 3^2 \times 11$$

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$$14) \quad 150 = 2 \times 3 \times 5 \times 5 = 2 \times 3 \times 5^2$$

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$$15) \quad 121 = 11 \times 11 = 11^2$$

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$$16) \quad 144 = 2 \times 2 \times 2 \times 2 \times 3 \times 3 = 2^4 \times 3^2$$

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$$17) \quad 180 = 2 \times 2 \times 3 \times 3 \times 5 = 2^2 \times 3^2 \times 5$$

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$$18) \quad 125 = 5 \times 5 \times 5 = 5^3$$

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$$19) \quad 132 = 2 \times 2 \times 3 \times 11 = 2^2 \times 3 \times 11$$

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$$20) \quad 200 = 2 \times 2 \times 2 \times 5 \times 5 = 2^3 \times 5^2$$

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