Area and volume in square and cubic feet and yards worksheet – Grade 7

Grade 7 · Mixed level · Mastery worksheet · 25 questions · **Version X84848**

Name: _____ Date: _____ Score: ___ / 25

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A Fill in the answer

Work out each answer and write it on the line.

1. How many cubic feet are in 9 cubic yards?

   Answer: _____

2. A bedroom floor is 16 feet long and 8 feet wide. What is its area in square feet?

   Answer: _____

3. How many square feet are in 12 square yards?

   Answer: _____

4. A room is 9 feet by 6 feet. How many square yards of carpet are needed to cover the floor?

   Answer: _____

5. How many cubic feet are in 3 cubic yards?

   Answer: _____

6. How many square feet are in 5 square yards?

   Answer: _____

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B Choose the answer

Circle the letter of the right answer.

7. Carpet costs $28 per square yard. How much does it cost to carpet an 18-foot by 15-foot room?

   A. $850.00 **B.** $840.00 **C.** $841.00 **D.** $840.10

8. A concrete patio is 5 feet by 8 feet and 6 inches thick. How many cubic feet of concrete are needed?

   A. 20 **B.** 40 **C.** 19 **D.** 30

9. A yard is 6 feet by 6 feet. Fencing is sold by the yard. How many yards of fencing go all the way around it?

   A. 18 **B.** 10 **C.** 7 **D.** 8

10. A garden bed is 15 feet long, 9 feet wide and 3 feet deep. How many cubic yards of soil fill it?

    A. 25 **B.** 15 **C.** 5 **D.** 14

C Choose all that apply

There is more than one right answer. Circle every one.

11. Circle every problem whose answer is greater than 18.

    A. A storage box is 4 feet long, 3 feet wide and 2 feet tall. What is its volume in cubic feet?

    B. A room is 12 feet by 6 feet. How many square yards of carpet are needed to cover the floor?

    C. A yard is 13 feet by 5 feet. Fencing is sold by the yard. How many yards of fencing go all the way around it?

    D. A storage box is 4 feet long, 5 feet wide and 3 feet tall. What is its volume in cubic feet?

    E. A bedroom floor is 12 feet long and 7 feet wide. What is its area in square feet?

12. Circle every problem whose answer is greater than 17.

    A. A concrete patio is 6 feet by 6 feet and 3 inches thick. How many cubic feet of concrete are needed?

    B. How many cubic feet are in 4 cubic yards?

    C. How many square feet are in 9 square yards?

    D. A garden bed is 15 feet long, 12 feet wide and 3 feet deep. How many cubic yards of soil fill it?

    E. A room is 15 feet by 9 feet. How many square yards of carpet are needed to cover the floor?

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D True or false

Check each answer. Tick True or False for every row.

13. Is each answer correct? Tick True or False.

	True	False
Carpet costs $26 per square yard. How much does it cost to carpet a 12-foot by 9-foot room? Answer: $312.00	☐	☐
Carpet costs $25 per square yard. How much does it cost to carpet an 18-foot by 12-foot room? Answer: $600.00	☐	☐
A storage box is 8 feet long, 3 feet wide and 4 feet tall. What is its volume in cubic feet? Answer: 91	☐	☐

14. Is each answer correct? Tick True or False.

	True	False
A bedroom floor is 14 feet long and 9 feet wide. What is its area in square feet? Answer: 132	☐	☐
A yard is 11 feet by 7 feet. Fencing is sold by the yard. How many yards of fencing go all the way around it? Answer: 12	☐	☐
A concrete patio is 8 feet by 8 feet and 6 inches thick. How many cubic feet of concrete are needed? Answer: 64	☐	☐

E Spot the mistake

Decide if the answer is right, then explain how you know.

15. A garden bed is 9 feet long, 9 feet wide and 3 feet deep. How many cubic yards of soil fill it? Ethan says the answer is 9. Is Ethan right? Explain how you know.

A. Yes **B.** No

BECAUSE...

16. How many cubic feet are in 5 cubic yards? Priya says the answer is 142. Is Priya right? Explain how you know.

A. Yes **B.** No

BECAUSE...

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F Match

Solve each problem, then tick the letter of its answer.

17. Answers to choose from:

A 30 **B** 117 **C** $696.00 **D** 72

	A	B	C	D
How many square feet are in 8 square yards?	☐	☐	☐	☐
Carpet costs $29 per square yard. How much does it cost to carpet an 18-foot by 12-foot room?	☐	☐	☐	☐
A room is 18 feet by 15 feet. How many square yards of carpet are needed to cover the floor?	☐	☐	☐	☐
A bedroom floor is 9 feet long and 13 feet wide. What is its area in square feet?	☐	☐	☐	☐

18. Answers to choose from:

A 21 **B** 96 **C** 270 **D** 16

	A	B	C	D
A yard is 15 feet by 9 feet. Fencing is sold by the yard. How many yards of fencing go all the way around it?	☐	☐	☐	☐
A storage box is 8 feet long, 6 feet wide and 2 feet tall. What is its volume in cubic feet?	☐	☐	☐	☐
A concrete patio is 6 feet by 7 feet and 6 inches thick. How many cubic feet of concrete are needed?	☐	☐	☐	☐
How many cubic feet are in 10 cubic yards?	☐	☐	☐	☐

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G Put in order

Solve, then write the letters in order.

19. Work out each answer. Then write the letters in order, from the smallest answer to the largest.

    P. A garden bed is 18 feet long, 6 feet wide and 3 feet deep. How many cubic yards of soil fill it? _____

    Q. How many square feet are in 11 square yards? _____

    R. A bedroom floor is 20 feet long and 7 feet wide. What is its area in square feet? _____

    Order: _____ , _____ , _____

20. Work out each answer. Then write the letters in order, from the smallest answer to the largest.

    P. A room is 18 feet by 6 feet. How many square yards of carpet are needed to cover the floor? _____

    Q. A storage box is 4 feet long, 6 feet wide and 2 feet tall. What is its volume in cubic feet? _____

    R. A yard is 11 feet by 10 feet. Fencing is sold by the yard. How many yards of fencing go all the way around it? _____

    Order: _____ , _____ , _____

I Word problems

Show how you worked out each answer in the box.

21. Carpet costs $18 per square yard. How much does it cost to carpet an 18-foot by 12-foot room?

    SHOW YOUR WORK

    Answer: _____

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22. A concrete patio is 8 feet by 8 feet and 3 inches thick. How many cubic feet of concrete are needed?

SHOW YOUR WORK

Answer: _____

23. A garden bed is 9 feet long, 12 feet wide and 3 feet deep. How many cubic yards of soil fill it?

SHOW YOUR WORK

Answer: _____

24. Carpet costs $17 per square yard. How much does it cost to carpet a 12-foot by 15-foot room?

SHOW YOUR WORK

Answer: _____

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J Challenge

A harder problem. Take your time.

25. A concrete patio is 10 feet by 4 feet and 6 inches thick. How many cubic feet of concrete are needed?

SHOW YOUR WORK

Answer: _____

Score by section: A ___/6 · B ___/4 · C ___/2 · D ___/2 · E ___/2 · F ___/2 · G ___/2 · I ___/4 · J ___/1

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