Grade 6 Chapter 6 Skills Bank

Answers

1. a) 1, 2, 3, 4, 6, 12, 24 **c)** 1, 2, 4, 8, 16, 32, 64
b) 1, 7, 49 **d)** 1, 3, 5, 15, 25, 75

2. For example, 1, 36, 2, 18, 3, 12, 4, 9, and 6.

3. a) For example, 2005 is divisible by 5, so it can't be prime.
b) For example, 2006 and 2008 are both divisible by 2, so they are composite.

4. a) 4, 8, 12, 16, 20 **c)** 10, 20, 30, 40, 50
b) 6, 12, 18, 24, 30 **d)** 11, 22, 33, 44, 55

5. a) 15 times **b)** 10 times **c)** 5 times
(Note: If students assume that both go off at the initial flipping of the switch, the answers will be **a)** 16 **b)** 11 and **c)** 6. These answers are also correct.)

6. a) \$10 **b)** \$5

7. For example, since two 50-cent coins make a dollar or 100 cents, 12×50 is the same as $6 \times 100 = 600$.

8. a) 3500 **b)** 8000 **c)** 30 000 **d)** 400 000

9. a) 30 000 cm^2 **b)** 180 000 cm^2

10. a) No. 76×89 should be less than $80 \times 90 = 7200$, so 7764 is not reasonable.
b) Yes. 102×48 should be close to $100 \times 50 = 5000$, so 4896 is reasonable.
c) No. 45×4985 should be between $40 \times 5000 = 200\,000$ and $50 \times 5000 = 250\,000$, so 124 325 is not reasonable.
d) Yes. 2394×63 should be between $2000 \times 60 = 120\,000$ and $2500 \times 70 = 175\,000$, so 150 822 is reasonable.

11. a) \$1100
b) For example, I would round the number of buttons on a vest to 300; then there would be $2 \times 300 = 600$ packages of buttons, which would cost $\$2 \times 600 = \$1200$.

12. a) 5670 **c)** 236 830 **e)** 371 219
b) 15 246 **d)** 782 144 **f)** 30 736

13. a) 157 248 km
b) For example, if I round 378 km to 400 km and 52 weeks in one year to 50 weeks, the answer should be close to $400 \times 8 \times 50 = 3200 \times 50 = 160\,000$, so 157 248 is reasonable.

14. a) 2 **d)** 1000 **g)** 65 **i)** 655
b) 38 **e)** 2770 **h)** 600 **j)** 277
c) 457 **f)** 6

15. a) 50; to check: $2 \times 5 = 10$, so $20 \times 50 = 1000$
b) 50; to check: $2 \times 5 = 10$, so $50 \times 200 = 10\,000$
c) 80; to check: $8 \times 5 = 40$, so $80 \times 500 = 40\,000$
d) 600; to check: $6 \times 8 = 48$, so $600 \times 800 = 480\,000$

16. 30 t or 30 000 kg

17. a) Yes. $9675 \div 25$ should be close to $10\,000 \div 25 = 400$, so 387 is reasonable.
b) No. $9990 \div 45$ should be close to $10\,000 \div 50 = 200$, so 122 is not reasonable. It is too low.
c) No. $2820 \div 12$ should be between $2400 \div 12 = 200$ and $3600 \div 12 = 300$, so 135 is not reasonable. It is too low.
d) Yes. $7293 \div 39$ should be close to $8000 \div 40 = 200$, so 187 is reasonable.

18. For example, $4431 \div 71$ should be close to $4200 \div 70 = 60$, so it is between 50 and 70.

19. a) \$1200
b) For example, I can round the number of golfers to 150, and divide by 3 to get 50 packs of golf balls. 50×25 is between $50 \times 20 = 1000$ and $50 \times 30 = 1500$, so 1200 is a reasonable answer.

20. a) 543 **b)** 466 **c)** 117 **d)** 268

21. a) For example, with part **a)**, $9774 \div 18$ is close to $10\,000 \div 20 = 500$, so 543 is a reasonable answer.
b) For example, with part **b)**, $13 \times 466 = 6058$.

22. 75 cartons

23. The answer is 52 R4, so they would need 53 buses.

24. 85 cm

25. a) For example, if 1575 hockey fans are seated in 25 equal sections, how many people are in each section?
b) For example,

Understand
All 25 sections are the same size, so they contain the same number of people.

Make a Plan
I need to divide 1575 by 25 to calculate the number of people in each section.

Carry Out the Plan

$$\begin{array}{r} 63 \\ 25\overline{)1575} \\ \underline{1500} \\ 75 \\ \underline{75} \\ 0 \end{array}$$

There are 63 people in each section.

26. You get the official answer when you perform the multiplications first: $2 \times 4 + 10 \times 3 = 8 + 30 = 38$