1. Draw a factor tree for 630 and then
(9) write the prime factorization of 630.

2. Which of these numbers has both
(9) 3 and 5 as factors?

   A. 543

   B. 350

   C. 405

   D. 925

3. A rectangular room is 15 feet long
(8) and 12 feet wide. What is its area?

4. Albert will fence a rectangular plot
(8) of land 200 feet long by 150 feet
wide. What is the perimeter of the
plot of land?

5. The movie is 204 minutes long.
(8) How many hours and minutes is
204 minutes?

6. A half gallon of orange juice can
(4, 6) fill how many 8 ounce glasses?
(1 gallon = 4 qt, 1 qt = 2 pt,
1 pt = 16 oz)

7. The daily high temperatures for
(7) each day of the week are shown
below. What was the mean high
temperature for the week?
78°F, 82°F, 84°F, 85°F, 85°F, 83°F, 84°F

8. Find the median temperature of the
(7) data in question 7.

9. Use prime factorization to
(10) reduce $\frac{45}{210}$.

10. What number completes the
(10) equivalent fraction?
$$\frac{3}{5} = \frac{\ }{75}$$

11. Arrange these seven numbers from
(5) least to greatest.
$$0, \frac{1}{2}, \frac{2}{5}, \frac{4}{3}, 1, -1$$

12. Compare: $|-6| \bigcirc |6|$
(7)

13. Which two numbers on the number
(7) line are seven units from zero?

14. Which of the following correctly
(1, 10) describe –3? Choose all answers
that apply.

   A. counting number

   B. whole number

   C. integer

   D. rational number

15. The product of 12 and 8 is how
(2) much greater than the sum of
12 and 8?

16. Use the associative and commutative
(1) properties to make the calculation
easier. Justify the steps.
4 (23 · 25)

For questions 17–20, simplify the
expression.

17. $50 ÷ 8
(2)

18. 24 × $8.75
(2)

19. $\frac{1}{4}$ of $25.00
(2)

20. $\frac{2}{3}$ of 144
(2)

630
$$630 = 2 \cdot 3 \cdot 3 \cdot 5 \cdot 7$$
or
$$630 = 2 \cdot 3^2 \cdot 5 \cdot 7$$
(factor tree: 63 × 10, 9 7, 2 5)

A. 543 X doesn't end in 5.
B. 350 X not with 3
C. (405) — 405÷3=135, 405÷5=81
D. 925 X not with 3

15
×12
180 ft²
Area = L×W

50' rectangle 200' / 150' / 200'
P = Add all sides
P = 150+200+150+200
P = 700 ft

204
− 60 → 1hr
144
− 60 → 1hr
84
− 60 → 1hr
24 min
(3 hrs 24 min)

6.
½ gallon = 2 quarts
2 quarts = 4 pints
4 pints × 16 oz = (64 oz)
per pint

7. mean -- add all #'s, divide by amount of #'s
78+82+84+85+83+84 = 581
581 ÷ 7 = (83°F)

8. median = put in order @ find middle #
78 82 83 84 84 85 85
X X X ↑ X X X
(84°F)

9.
$$\frac{45}{210} = \frac{2 \cdot 3 \cdot \ldots}{2 \cdot 3 \cdot 5 \cdot 7} = \frac{3}{14}$$
45: 9 5, 3 3
210: 21 10, 3 7, 2 5

10.
3/? = x16/? ... 45/45
x16 75
5√75, 25, 25, 0
(45)

11.
0÷0 = 0   4/3 = 1.3̄
1/2 = 0.5   1/1 = 1
2/6 = 0.4   2/3 = 0.6̄
            −1/1 = −1

12.
|−1| 0 |6| 6
(−1, 0, 2/5, 1/2, 2/3, 4/3)

13. how many places from zero?
6, 6

14.
7, −7

15.
C, D.

16.
4 · (23 · 25)
(25 · 4) · 23   Comm. Prop
(25 · 4) · 23   Assoc. Prop.
100 · 23 = (2300)

17.
$6.25
8√50.00
48
20

18.
$8.75
× 24
3500
17500
210.00
($210)

19. mult.
¼ of 25 → DIVIDE
25 ÷ 4 = 6.25
6.25 × 1 = 6.25
($6.25)

20. mult.
2/3 of 144 → DIVIDE
144 ÷ 3 = 48
48 × 2 = 96
(96)

15.
product → 12 × 8 = 96
sum → 12 + 8 = 20
how much more?
96 − 20 = (76)