

problem set 1

1. $\frac{3}{5}$ 2. $\frac{1}{8}$ 3. $1\frac{2}{3}$ 4. $\frac{8}{15}$ 5. $\frac{7}{40}$ 6. $\frac{13}{24}$ 7. $\frac{18}{65}$ 8. $\frac{4}{15}$
 9. $\frac{43}{45}$ 10. $\frac{11}{17}$ 11. $\frac{11}{26}$ 12. $\frac{6}{35}$ 13. $1\frac{11}{56}$ 14. $\frac{17}{20}$ 15. $\frac{21}{22}$
 16. $5\frac{7}{10}$ 17. $13\frac{17}{24}$ 18. $8\frac{21}{40}$ 19. $7\frac{8}{15}$ 20. $20\frac{5}{8}$ 21. $8\frac{14}{15}$
 22. $23\frac{14}{33}$ 23. $63\frac{7}{10}$ 24. $36\frac{47}{104}$ 25. $5\frac{43}{65}$ 26. $13\frac{77}{190}$ 27. $21\frac{47}{170}$
 28. $12\frac{23}{56}$ units 29. $17\frac{74}{77}$ units 30. $9\frac{1}{16}$ units

practice

- a. 70 b. $x = 40$; $y = 100$ c. $x = 34$; $y = 34$

problem set 2

1. Right angles 2. Straight angle
 3. An acute angle is an angle that is smaller than a right angle.
 4. An obtuse angle is an angle that is larger than a right angle, but smaller than a straight angle.
 5. (a) 90° (b) 180° (c) 360° 6. Equilateral polygons 7. Equiangular polygons
 8. Regular polygons
 9. (a) A right triangle is a triangle that contains one right angle.
 (b) An acute triangle is a triangle that contains three acute angles.
 (c) An obtuse triangle is a triangle that contains one obtuse angle.
 (d) An equiangular triangle is a triangle that contains three angles of equal measure.
 10. (a) An isosceles triangle is a triangle that has at least two sides of equal length.
 (b) An equilateral triangle is a triangle that contains three sides of equal length.
 (c) A scalene triangle is a triangle that contains three sides of unequal length.

11. 50 12. 40 13. $\frac{7}{9}$ 14. $\frac{31}{35}$ 15. $\frac{1}{3}$ 16. $\frac{11}{15}$ 17. $\frac{4}{7}$ 18. $6\frac{1}{2}$
 19. $7\frac{5}{8}$ 20. $13\frac{1}{10}$ 21. $12\frac{14}{15}$ 22. $15\frac{4}{15}$ 23. $9\frac{3}{10}$ 24. $8\frac{2}{15}$ 25. $3\frac{1}{15}$
 26. $2\frac{5}{6}$ 27. $1\frac{5}{6}$ 28. $7\frac{5}{9}$ cm 29. $6\frac{7}{8}$ m 30. $5\frac{8}{15}$ units

practice

- a. 30 cm b. 3 m c. 38 km d. 10π in. = 31.4 in. e. $(18 + 3\pi)$ ft = 27.42 ft

problem set 3

1. 180° 2. (a) 60° (b) 60°
 3. The angles opposite the sides of equal length have equal measures.
 4. The sides opposite the angles of equal measure have equal lengths.
 5. Parallelogram 6. Trapezoid 7. 40 in. 8. 4 ft 9. 12π cm = 37.68 cm
 10. 8π m = 25.12 m 11. 90 in. 12. 80 in. 13. $(12 + 2\pi)$ in. = 18.28 in.

14. $(26 + 3\pi)$ in. = 35.42 in. 15. 60 16. 35 17. $\frac{7}{9}$ 18. $\frac{1}{6}$ 19. 1 20. $7\frac{1}{4}$
 21. $11\frac{8}{9}$ 22. $21\frac{1}{2}$ 23. $8\frac{1}{16}$ 24. $13\frac{31}{56}$ 25. $1\frac{1}{3}$ 26. $11\frac{7}{33}$ 27. $\frac{11}{12}$
 28. $25\frac{15}{16}$ 29. $26\frac{11}{15}$ ft 30. $3\frac{1}{6}$ yd

practice

- a. $12\frac{3}{5}$ b. $2\frac{4}{11}$ c. 760.939 d. 724.74 e. 302.061 f. 100.7
 g. $75(12)(2.54)$ cm h. $\frac{450}{(12)(5280)}$ mi

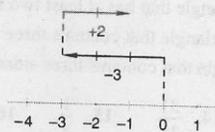
problem set
4

1. A number is an idea. A numeral is a symbol used to express the idea of a number.
2. (a) Decimal system (b) The Hindus of India (c) 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
3. (a) 1, 2, 3, 4, 5, ... (b) 1, 2, 3, 4, 5, ...
4. A positive real number is any number that can be used to describe a physical distance greater than zero.
5. (a) A rectangle is a parallelogram with four right angles.
(b) A rhombus is an equilateral parallelogram.
(c) A square is a rhombus with four right angles.
(d) Yes
6. $20(2.54)$ cm 7. $25(12)(2.54)$ cm 8. 50 cm 9. 6 m 10. 16π in. = 50.24 in.
11. 10π ft = 31.4 ft 12. 54 cm 13. 110 cm 14. $(24 + 4\pi)$ cm = 36.56 cm
15. $(24 + 5\pi)$ cm = 39.7 cm 16. 55 17. $\frac{1}{3}$ 18. $13\frac{5}{8}$ 19. $2\frac{7}{8}$ 20. $90\frac{5}{16}$
21. $8\frac{2}{5}$ 22. 30 23. $\frac{27}{40}$ 24. $4\frac{20}{39}$ 25. 6.03301 26. 7.98209 27. 55.4984
28. 44 29. $13\frac{7}{8}$ m 30. $5\frac{1}{2}$ km

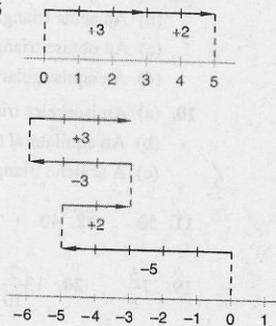
practice

- a. 4 b. 4.2 c. -4 d. -8 e. 5

f. -1



g. -3

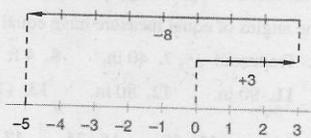


problem set
5

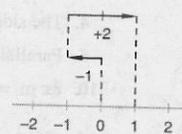
1. (a) {1, 2, 3, 4, ...} (b) {0, 1, 2, 3, 4, ...} (c) {..., -3, -2, -1, 0, 1, 2, 3, ...} 2. Origin
3. (a) A dot on the number line that represents the location of the number
(b) The number that the point represents
(c) The greater number is further to the right-hand side on the number line.

4. 8 5. 8 6. 12 7. -10 8. -10 9. 18

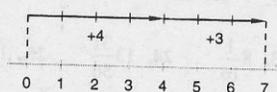
10. -5



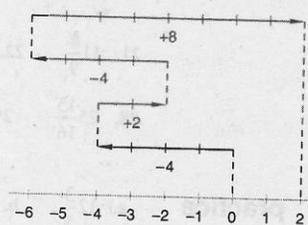
11. 1



12. 7



13. 2



14. $\frac{28}{2.54}$ in. 15. $\frac{42}{(2.54)(12)}$ ft 16. 70 in. 17. 20π ft = 62.8 ft 18. 66 yd