Unit 7 Test Study Guide

1. Find the slope of a line that passes through (-2, 6) and (3, 8).

$$\frac{6-8}{-2-3} = \frac{-2}{-5} = 2/5$$

2. Find the slope of a line that passes through (5, 8) and (3, 6).

$$\frac{8-6}{5-3} = \frac{2}{2} = 1$$

3. Find the slope of a line that passes through (2, 6) and (2, 9).

$$\frac{6-9}{2-2} = \frac{-3}{0} = \text{undefined}$$

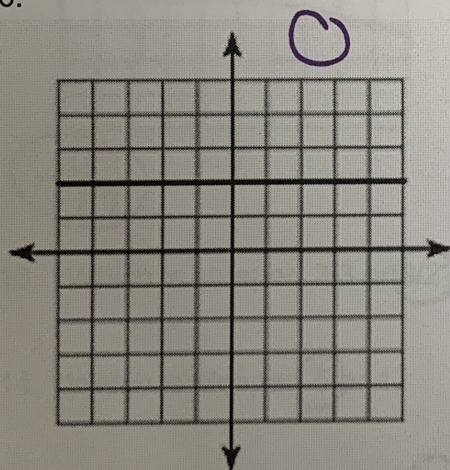4. Find the slope of a line that passes through (4, 6) and (3, 6).

$$\frac{6-6}{4-3} = \frac{0}{1} = 0$$

5. Find the slope of a line that passes through (-1, 5) and (5, 4).
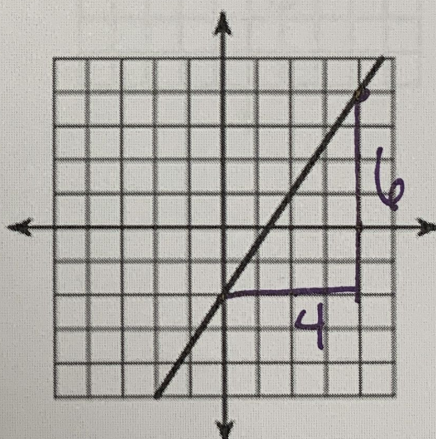
$$\frac{5-4}{-1-5} = \boxed{\frac{1}{-6}}$$
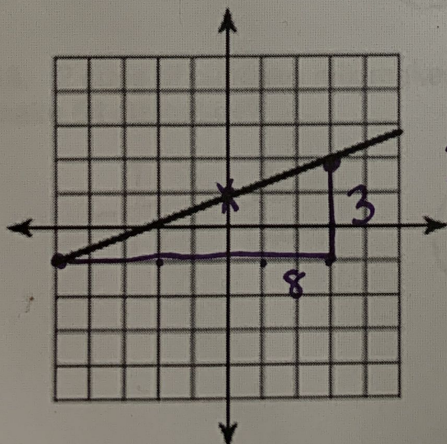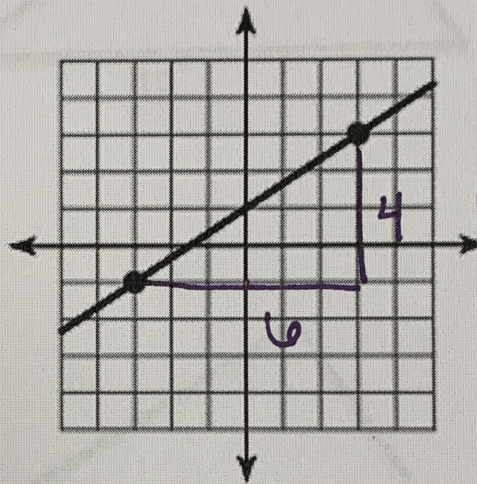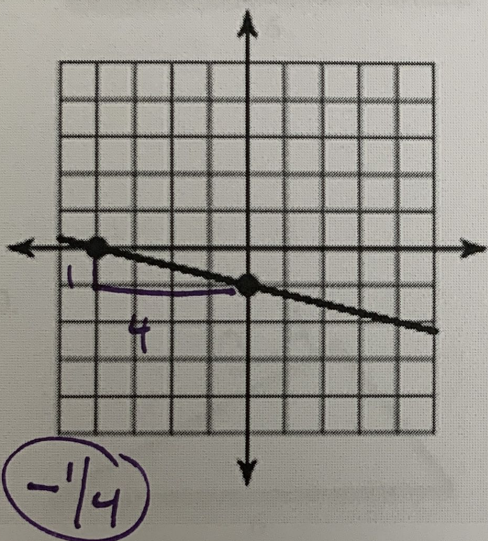
Find the slope of each.

6.

7.

$$6/4 = \boxed{3/2}$$

$$3/8$$

undefined

$\dfrac{-3}{2}$

$\dfrac{2}{3}$

6

4

$-\dfrac{1}{4}$
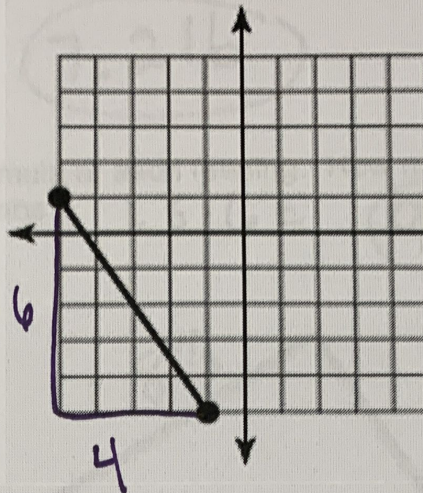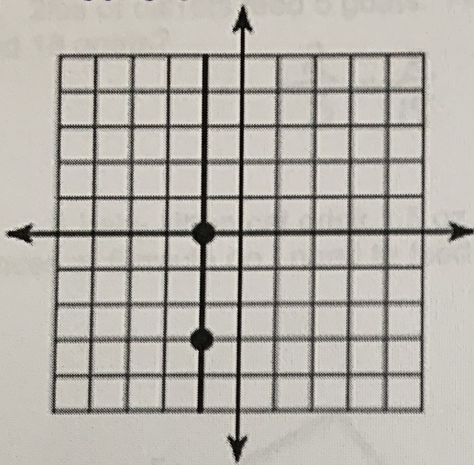
13. Which is steeper 2/3 or ⟨3/2?⟩

14. Which is steeper ⟨-5⟩ or 4?

15. Which is steeper 1/10 or ⟨2/5?⟩

16. 2 cups of cupcake mix makes 48 cupcakes. How much mix do I need to make 64 cupcakes?

$$\dfrac{2}{48} = \dfrac{x}{64}$$

$2\,\dfrac{2}{3}$ cups

17. 2lbs of carrots feed 5 goats. How many pounds of carrots do I need to feed 18 goats?
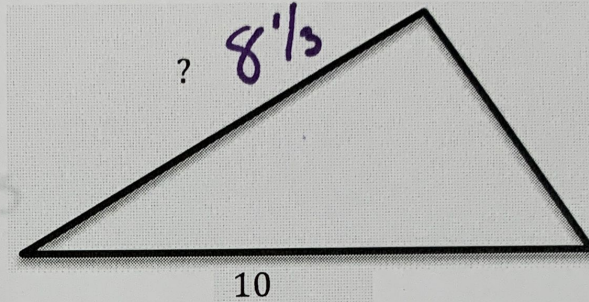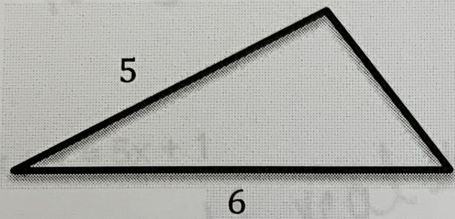
$$\frac{2}{5} = \frac{x}{18}$$

(7.2 lb)

18. A baby kitten cat drink 1.5 oz of formula at each feeding. How many ounces of formula do I need to feed 6 kittens? $1.5 \cdot 6 =$ (9 oz)
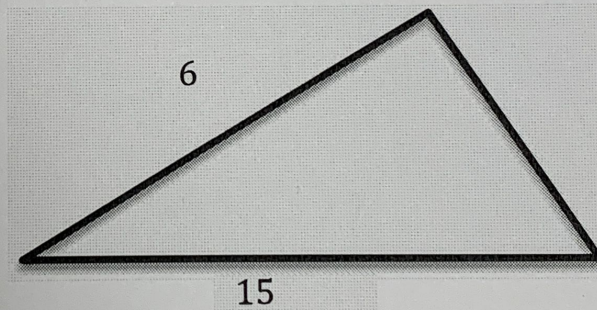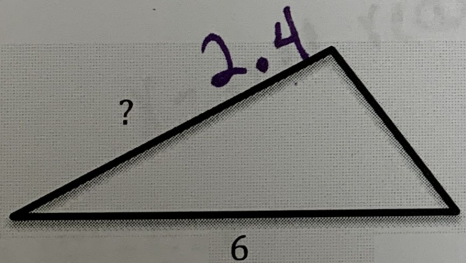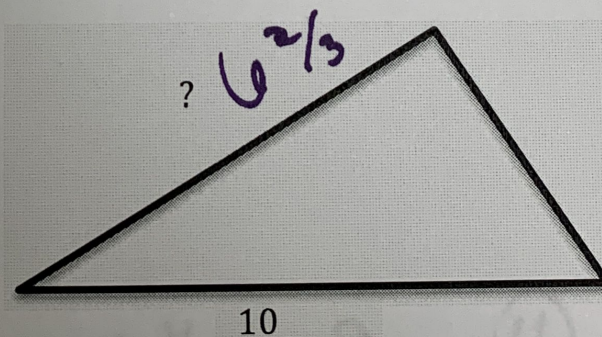
19.

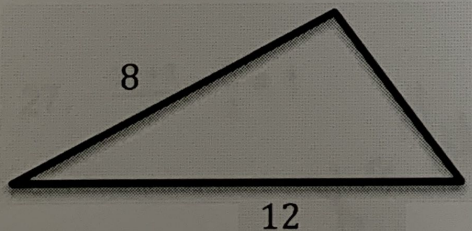NO Solution

X = all real

5

6

? $8\frac{1}{3}$

10

20.

real #s

2.4

?

6

6

15

21.

8

12

? $6\frac{2}{3}$

10

22. $5 - (2x - 4) = 5x + 3$

$$x = 6/7$$

$$\frac{6 + \frac{1}{2}}{2 - 4} = \frac{6.5}{-2} = -3.25$$

23. $4x + 3 = 4x - 2$

NO solution

24. $5x + 1 = 5x + 1$

$x =$ all real #s

25. $3x + 4 = -(-3x - 4)$

$x =$ all real #s

26. $\frac{3x+1}{5} + \frac{2x}{2} = 6$

$$x = 29/8$$

27. $\frac{2x+3}{4} + \frac{x}{2} = 1$

$$x = 1/4$$

28. Simplify: $\frac{6+2(4)-6}{5 \div 10(3+1)}$

$$\frac{6 + 8 - 6}{\frac{1}{2}(4)} = \frac{8}{2} = \boxed{4}$$

29. Simplify: $\dfrac{6+2 \div 8(2)}{2-6 \div 3(2)}$

$$\frac{6 + \frac{1}{4} \cdot 2}{2 - 2 \cdot 2} = \frac{6 + \frac{1}{2}}{2 - 4} = \frac{6.5}{-2} = \boxed{-3.25}$$